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## LIME—No. 2.

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The carbonate of lime, as we remarked in our last article, constitutes about one-seventh part of the crust of the globe. The forms in which this compound of lime appears, are very numerous. Limestone, chalk, marble, stalactites, stalagmites, oolite, oyster shells, the shells of the eggs of our domestic fowls, are a few of the forms in which we find the carbonate of lime. If we pulverize any one of these and pour on it any acid, even vinegar will answer, violent effervescence ensues, owing to the escape, in the gaseous form, of carbonic acid. It may be clearly shown that from one pound of pulverized marble or pulverized egg-shells, we can obtain in this way 28 gallons of carbonic acid gas. What incalculable volumes of this gas are imprisoned, therefore, in the calcareous rocks of the globe!

All these forms of carbonate of lime have another property in common. When subjected to high heat, the carbonic acid gas is expelled, and lime, in the caustic state, is left. It is in this way that we get lime from limestone, oyster shells, etc.

Let us notice how this caustic lime behaves when exposed to the atmosphere. If we pour upon it about 25 per cent. of water, the lumps of lime fall down into a perfectly dry, white powder. It is now slaked lime, the water has combined chemically with the lime, and is now a part of the solid, slaked lime, or hydrate of lime. The heat evolved is due to the passage of the water from the liquid to the solid state. The same change takes place, but more slowly, on exposing the lime to the atmosphere. But still another change, at length, will occur. The lime will lose its caustic or disorganizing properties. It becomes what is very descriptively called mild lime. The neutral or negative properties which it possessed as limestone, again appear. What has happened? The carbonic acid of the atmosphere has combined with the caustic lime, neutralized its properties, and formed the original carbonate of lime. If caustic lime, when spread upon the soil, inevitably goes back to the original form—carbonate of lime,—why then incur the heavy expense of burning the limestone? Why not use limestone at once? On this point we make two remarks.

(1.) Although caustic lime spread on the soil becomes the carbonate of lime, yet this carbonate of lime is a very different thing in its mechanical condition from the original carbonate of lime or limestone, from which it was obtained. As the lime slakes it falls into a fine powder, and as a powder it becomes the carbonate of lime. Now, no solid in the soil is valuable except as it is dissolved by the water of the soil. The capillary tubes of plants are so small that solids cannot enter as such; they can enter only in a state of solution. The mere mechanical reduction of lime—accomplished in slaking—increases indefinitely the solubility of the resulting carbonate of lime by increasing in-

definitely the amount of surface exposed to the solvent action of water.

But suppose we grind the limestone and so accomplish its mechanical reduction. Very well; but then this question presents itself: which is cheaper, to grind the limestone, or to heat it sufficiently for the expulsion of carbonic acid. In the latter case, the lime, as before explained, falls into a powder of itself, as it slakes. Now, if the soil be deficient in lime, and the only object of the application is to satisfy this deficiency, then perhaps the application of ground limestone will answer the purpose as well as the application of caustic lime. But it must be remembered that, inasmuch as limestone contains only 56 per cent. of lime, it should be applied nearly twice as heavily as lime to give the same amount of lime to the soil.

(2.) The caustic lime, spread over a field, becomes, it is true, the neutral carbonate of lime, but not all at once. Before it has passed, and while it is passing, into the carbonate of lime, its caustic properties have been causing the rotting and decomposition of organic matter in the soil and so fitting it for assimilation by growing plants. In applying ground limestone then, the only good effect we can expect is that it may supply a deficiency of lime in the soil; it will have no effect in hastening the decomposition of turf and vines turned under to afford pabulum to the coming crop.

It has been maintained, however, that limestone, being a compound of carbonic acid and lime, the carbonic acid—44 per cent. of its weight—really adds to its value, the carbonic acid being considered a source of the carbon of plants. This position seems to me to be simply absurd. We might, with equal propriety, contend that a fertilizer is concentrated and made more valuable by the amount of water it contains, inasmuch as water is a source, and the chief source, of the hydrogen and oxygen of plants. The fact is that we must rely upon the atmosphere not only for water, furnishing to growing crops oxygen and hydrogen, but also for carbonic acid, the great source of carbon to plants. The supply of carbon, in the form of carbonic acid, is fully as ample as the supply of oxygen and hydrogen in the form of water. The atmosphere brooding over every acre of the earth's surface is freighted with 28 tons of carbonic acid, containing some 8 tons of carbon. The demand for carbon of an acre in vigorous vegetation is but little more than half a ton, so that the supply of carbon is some 16 times the demand, even if every square foot of the earth's surface supported vegetation. And as plants are constantly decomposing carbonic acid to obtain carbon, the amount so taken from the atmosphere is as constantly reproduced by animal respiration, by combustion, and by the spontaneous decay of organic matter. The idea then that carbonate of lime has an advantage over lime from the large amount of carbonic acid imprisoned in it, is sheer nonsense. The atmosphere contains, and of necessity always will contain, an abundant amount of carbonic acid to supply to the vegetable world all the carbon needed in building up its compounds.

## North Carolina Phosphates.

Messrs. Editors American Farmer:

In the Monthly Bulletin of the North Carolina Department of Agriculture for January, 1884, I find an article by Prof. Dabney, descriptive of extensive deposits of mineral phosphates found in the State. A marvellous and a fortunate State is old North Carolina. She has the finest climate in America. She has the finest fisheries of our Atlantic coast. She has as much accessible timber of the most valuable kinds as any State in the Union. She has a vast variety and abundance of the most valuable minerals. She has manufacturing facilities and agricultural resources not yet dreamed of by the most sanguine. Her people are inferior to no other people in intelligence, virtue, industry, courage, hospitality, and every admirable and attractive trait. Moreover, they don't brag like they do in Virginia and Kentucky; nor they don't thank God like they do in Massachusetts, that they are not as other men are. Fortunate in many things, in few things is North Carolina more fortunate than in her Department of Agriculture, which includes under one administration the Experiment Station, the Physical Survey, the Commission of Fisheries, and the Bureau of Statistics and Immigration, all working in efficient harmony to publish and make known the great and varied resources and attractions of the grand old State. The discovery of the vast beds of phosphates in North Carolina has long been anticipated by men of science. That other such deposits exist in Virginia and Maryland is in the highest degree probable. It is true that the best of these North Carolina phosphates yet discovered are only about half as rich in phosphoric acid as the best of these found in South Carolina. Some of the deposits are really phosphatic marl, containing about 60% of carbonate of lime, and from 10% to 12% of phosphate of lime. In some places the percentage of phosphate of lime runs above 30%, and to this Professor Dabney assigns a commercial value of \$16.00 per ton. Sir John Bennet Lawes suggests that the phosphatic marls when burnt will be reduced by slacking to a fine powder, and that the phosphate so reduced, will be available to plants without the use of sulphuric acid to make it so. But this is the tricalcic, so called "insoluble" phosphate of lime, which we have so many times been told is worthless, and which according to Dr. Frost, of South Carolina, if I understand him aright, Professor Dabney himself classes with water, insoluble sand, etc., as without value in his report of official analyses. The best of these phosphates will enter commerce, probably in large quantities, when the deposits are fully developed.

The phosphatic marls will not bear transportation to distant localities, but will prove of incalculable value to the agriculture of the localities in which they are found.

M. G. ELLZEY, M. D.

Washington, D. C.

ENGLAND had last year under wheat 2,600,000 acres; America, 39,000,000.

## Experiments in Ensilage.

Messrs. Editors American Farmer:

The following extracts from a letter written by a venerable and enthusiastic farmer, will perhaps add something to the facts now so eagerly sought with regard to ensilage. He shows that years have not diminished his buoyant energy by not only setting a good example in performing experiments, but by giving others the results. It was not intended for publication, and he will not allow his name to be appended, though it would be recognized as a persistent and early friend of agriculture, even when engrossed in the duties of a busy professional life.

Montgomery Co., Md. H. C. H.

MY DEAR SIR—I am greatly disappointed in being prevented from meeting with you at the Farmers' Convention. I had made every preparation for the trip, and among other things prepared a couple of baskets with specimens of two different experiments in ensilage, which I think would have led to some discussion and, I hope, to further experiment also.

A year ago last summer I had a field of second crop clover which, when it was cut, was in such condition with weeds, briars, &c., that we did not think it fit for hay, and so we followed the mower with the wire spring rake, and that with the wagons; hauled it to a place convenient to the barn; made a rick about 25 by 12 or 13 feet, and of proportional height; covered it with wheat straw; threw over it poles tied at the top and weighted with stones, and took our chances. It became after a few days so hot that I could not bear my hand in it two minutes. It smoked like a "tar kit," and for a week or more we watched it with no little anxiety, fearing spontaneous combustion. It escaped that calamity, which might and probably would have involved a heavy loss. So matters stood till the month of February. My stock—fed on corn stalks with their fodder, well preserved, and hay with a little corn meal for the milch cows—began to show the need of some change in their food, and we resolved to open the rick and see the result of our experiment. The first slices, cut of course with a hay knife, were not very promising; still the cattle ate it. The next course seemed to be just what they wanted, and they ate it with avidity, leaving fodder and cut timothy and clover hay for it. Mr. Carroll, my manager, then tried them with a slight sprinkle of meal on each kind of apparently dried food. They still eagerly sought the "ensilage," [for it was ensilage] from the rick. But the most striking fact was that with the ensilage the cows increased in milk and all the stock took on flesh, and their skin and hair improved in color as to the skin and in smoothness as to the hair.

My horses and hogs seemed to relish it, equally with the stock, but we did not proceed far enough with them to judge of its effect. I had intended to exhibit a specimen of this at the Convention last year, but was prevented from getting there. So well pleased was I with this that I intended to repeat the experiment this year.



But I was obliged to use the ground for pasture, and as a substitute I resorted to another plan.

My barn is in the shape of an L, 80 feet on the north and west sides, and 40 on the east. The north and west walls are 40 feet, (more on the north) of stone. The south part of the L, &c., is frame.

I had some corn for green food, and I had half (say 4 rods square) cut and carried directly into the northwest corner of my barn where the walls are of stone, and the other half cut into about 1½ inches carried into the south-west corner of the frame part of the building. The first was laid straight, and tramped down as laid; the other packed from the cutting-box and also tramped down by walking over them. The corn in both cases had been sown broadcast and cut with scythes. These two piles respectively were covered with fresh cured hay to the amount of some tons, and it was packed around.

It has, then, stood till last Friday, when Mr. Carroll opened the one of cut stalks in the corner of the wooden part of the barn. It was a disappointment. The stuff was frozen—black, with every appearance of having been fermented, and altogether repulsive to the eye. It had very little odor, and was not at all disagreeable. The cattle ate it readily and the hogs "went for it." The taste was very slightly acid, and I chewed it without hesitation or difficulty. But I doubt if it is wholesome food for man or beast. We afterwards opened the other, packed with whole stalks. To my very agreeable surprise it quite relieved my disappointment with the first. Mr. Carroll cut out a solid block, say 15 inches square and 5 or 6 thick. It was solid, compact, heavy, and had very much the appearance of well-packed bright tobacco. Its odor was pleasant and had possibly some alcoholic flavor; its taste not unpleasant, for I chewed it and swallowed the juice, and the stock devoured it with great zest.

My object was to see if ensilage could not be made without the labor and cost of a silo. True, it was a single experiment, but the result is such as to lead me to repeat it this year on a larger scale against the stone part of the barn with full length stalks, my only weight being fresh hay, and on a smaller scale with short cut stalks against the frame part of the barn—with another pile, having hay packed in behind the cut fodder and next the wooden wall to protect it from frost.

I had a specimen from each of these experiments prepared to exhibit at the Convention, and I wish you could see the *modus operandi*.

By the way, do you know any one who has given Alfalfa a fair trial, and what the result as compared with clover as food and as a renovator? B.

#### Ensilage Congress.

All sorts of associations, congresses, and conventions are being held in every section of the country, for the discussion of subjects of interest to the various branches of business, in which the participants feel themselves interested. One of the latest of these gatherings is that of an "Ensilage Congress" held in New York last month, and Dr. A. B. Heath was elected President.

Except in the matter of the Condensed Milk Company, the ensilage farmers report themselves successful during the past year. The only complaints against the milk have been made in cases where the cows were fed immediately before milking, and a change in the hour of feeding has rectified this. B. Rogers of Binghamton said he furnished the milk of ensilage-fed cows to many people in Binghamton. They complained of the milk just after the silo was open in winter. Out of three hotels, one had complained. Elder Evans of the Lebanon Shakers, said the Shakers filled three silos last summer,

and had fed out two of them. Their butter was as good as ever. Elder Evans thought that it is easy to make a poor article, but that there is no reason why ensilage is not a perfect food. He saw no injurious effect on the cattle. A resolution was passed asking the Department of Agriculture at Washington to make an analysis of ensilage milk, and of that produced by the ordinary feeding, and to publish the results; and also requesting the State Experiment Station of New York to make a similar comparative analysis.

Prof. Manly Miles read a paper on the prevention of acidity in ensilage. He said that fermentation is the result of a process of vital activity in which microscopic germs are nourished. These germs are called bacteria, and they produce the acidity. If the bacteria could be killed there could be no acidity. The way to kill them, he thought, was to fill the silo leisurely, and not put on the weights until the temperature is high enough to prevent its falling below the point necessary to kill the bacteria. This temperature, he had found, was from 115° to 122°. The result, he believed, would be uniformly sweet ensilage.

Edward Gridley and Dr. Tanner of Waasac, Dutchess County, recited the history of the opposition to the use of ensilage by the New York Condensed Milk Company, which claimed that milk made from ensilage would not keep. They declared that the company had used freely this milk for over three years without discovering any ill results from it, and that the consumers of the milk to whom it was now sent, were perfectly satisfied with it. The increased quantity of milk from the ensilage fed cows excited attention from the Condensed Milk Company, to which it was furnished, but no fault was found until February, 1888. The Borden Company's claim was not that the milk furnished was bad, but that the condensed milk made from it would not keep.

Dr. Tanner said that after breaking with the Borden Company, he put on his farm 100 steers for the market. To each of them twenty pounds of ensilage was fed twice a day, with six pounds of grain at noon. During the month of December the average gain in weight was seventy pounds each, one gaining 120 pounds in fifty days. Mr. Gridley thought it a question which was the way to make most money, but he thought it was by selling milk. However, he was not so certain of that when he found two old oxen gain 2½ pounds a day on ensilage. Dr. Tanner remarked that he had 150 cows, and after the trouble with the factory, he sold 100 of them, and took the milk of fifty to New York City. The customers who used the ensilage-fed milk did not complain of it.

John Mayer, of Theodore A. Havemeyer's Mountain Side Farm, near Mahwah, N. J., was enthusiastic in the praise of ensilage. He said: To each of 100 Jersey cows is given twenty pounds of ensilage in the morning, seven pounds of hay at noon, and twenty pounds of ensilage at night. Mixed with the ensilage is one quart of corn-meal and one of ground oats. Under this fodder, the cattle have grown in weight from 2 to 2½ pounds a day, while expenses have been reduced from \$3.40 a ton when ensilage was not fully adopted, to \$1.57. Horses are fed on ensilage three times a week, and hogs constantly. No bad results have been experienced on the farm from overfeeding cattle with ensilage. Their health is perfect. The cattle were never turned out to pasture, and had been fed in this way for three years. The ensilage had been taken from sixty-three acres of land, producing about twenty tons to the acre. Cows when taken from ensilage, fell off rapidly in milk production, which increased at once as soon as they were again placed on the diet.

In regard to the use of ensilage as food for horses, a variety of opinions was expressed. Dr. Baxter of Virginia, said that

it had been tried with fatal results in his State, and that autopsies showed that death was due to the presence in the throat of stomach-worms, which caused suffocation. This was due, he thought, to the acidity of the food, which drove the worms from the stomach. The experience of the superintendent of the Greenfield Park Farm, in Connecticut, was somewhat singular. Of ten horses fed a week on ensilage, eight had died, the trouble appearing to be in the throat. Henry Goodwill of Waasac, N. Y., had tried the experiment of feeding ensilage, and his horses thrived under it and got fat. Another New York farmer said he had fed ensilage to mules with good results. The general opinion seemed to be that the use of ensilage for horses was not desirable.

#### The Gunpowder Farmers' Club

Held its February meeting at the farm and residence of Col. Walter S. Franklin, on the 9th instant, a full attendance of members, and some guests being present, notwithstanding the unfavorable weather.

The Inspection Committee was accompanied on its tour of examination by all those in attendance, many signs of improvement being visible on the farm. The stables were full of fattening steers which showed the best of care, and were in thriving condition. Carried regularly, getting fourteen quarts of crushed corn and cob meal daily, with all the hay they can eat, they made a lot of promising beef animals. The barn with fodder cutter and crusher, and a corn and cob mill; the tool house and granary, capacious and in the best of order; the pig and poultry houses, were visited and showed methodical and painstaking care. The day was not favorable for visiting the grain fields, but it was evident even from a distance that this property was undergoing a rapid and great improvement. New fencing, ditching and grading, and liming have all been going forward, and the place gives promise of becoming one of the most productive in the county.

The visit to the farm over, the assembled company repaired to the smaller place of the Colonel at the Ashland Furnace, where the stables, outbuildings and garden were visited, all showing neatness and good order.

Assembled within the house the proceedings were read of the last monthly meeting and of the last meeting held at the same place. Under a call for new business, the club passed resolutions approving the proposed Agricultural Experiment Station, as demanded for the advancement and protection of the agricultural interests of the State, and as an institution whose establishment is warranted by the success of similar ones elsewhere.

The club also opposed any further appropriation of the taxpayers' money to the Agricultural College, that institution rendering no service to the agriculture of Maryland.

The club accepted an invitation to attend and join in the proceedings of the Farmers Convention of Central Maryland to be held in Baltimore on February 22d.

After some routine business, the HALF HOUR FOR QUESTIONS was in order.

John D. Matthews introduced the subject of sewerage of country places.

Edward Austen said great interest existed in Massachusetts in regard to sanitation. It had been found that typhoid fever, diphtheria, and other zymotic diseases prevailed more than formerly. The wells and springs are impregnated with sewage matter. The wash water and slops thrown out from the house, and the contents of the privies have soaked so long through the soil that it has become in many places saturated with such noxious materials. At his own place a spring long in use had been found to be contaminated by the drainage from a distant privy. At the residence of a member of

this club, he saw dish-water thrown out close to the well. This ought not to be, since after a while the soil will become infiltrated with injurious matters.

Thinks there ought to be a glazed pipe, well trapped, leading to a pit, and all liquid refuse from the house poured down it. The pit can be deodorized and disinfected by lime or other agents.

When he lived in New Jersey he had several thousand feet of ordinary drain tile laid a few inches beneath the surface, and all liquid matters were conducted through them and thus taken up by the soil and disposed of.

E. H. Matthews referred to trouble with rats in wells. It was found they do not go in from the surface; they live in the stone walls. Cementing the wall several feet below the top and tightly covering the opening was recommended.

L. Bacon. What is the price of digging wells by the foot?

John Crowther, Jr. \$1 a foot till you strike rock, then \$5 per foot.

Col. Franklin. What should be done with a heifer that disowns her calf and will not let it suck?

J. D. Matthews. Persevere; hold the calf up to her udder.

E. H. Matthews. If a cow kicks, tie a rope around her in front of her udder and over her back; draw it tight and she cannot kick.

E. Austen. Never allows a calf to suck after the first day.

E. G. Merryman. In managing a kicking cow puts a rope around her, in front of her udder and back of her hips, and draws it tight through a ring.

L. Bacon. Has a heifer that slipped her calf two months before her time, and has never cleansed properly, what shall he give her?

E. Austen recommended gentle purgative medicines and vaginal injections of dilute solutions of carbolic acid.

B. McL. Hardisty. What should be done with pigs, twelve weeks old, that have lost the use of their hind legs and drag them behind them?

Was recommended to give them wood ashes, to rub their loins with turpentine, etc.,

S. M. Price said kidney worms were the cause of the trouble.

The evening was so far advanced the usual subject was not taken up for discussion; but postponed to the next meeting, which will be held at Abram C. Scott's, March 8th. Subject: "What is best system of raising and feeding farm stock?"

#### Clover.

The old and good rule is to "sow the clover seed on the last snow." As the last snow will be here before long it may be timely to call the farmers' attention to the value of clover. I am pretty sure that we do not sow as much of it as we should, and the reason for this may be that we do not properly estimate its utility and intrinsic value. However, the value of clover for hay is pretty well understood, and I shall therefore speak only of its value for pasture and manure. These are so intimately associated that it is best to consider them together. For it is impossible to use clover for pasture without using it for manure also, and except in rare cases do I consider it advisable to use clover for manure without also using it for pasture.

No other plant furnishes better pasture for all classes of farm stock, and none other furnishes pasture so good for hogs and milch cows. A hog will thrive and fatten on clover pasture alone, and make a better growth than upon grain. And by far, not the least of the virtues of clover is its wholesomeness. Swine plague rarely breaks out among hogs on clover pasture. No other food produces a flow of milk so large in quantity, and at



the same time so rich in quality, and none other gives butter so excellent a color or agreeable a flavor. Even when out and dried into hay it forms a food of rare excellence for milch cows—in fact, for all classes of cattle, sheep and horses, and when moistened and softened is again an excellent food for hogs. Add to the excellence of its quality the luxuriance of its growth, and it becomes apparent that it is both an excellent and cheap pasture plant.

The question of its value as a manurial agent involves at the very outset the whole question of merit and value of green manuring. Perhaps there are very few readers of *Farm and Garden*, who are not convinced of the value of green manuring. But there are a great many farmers who yet oppose it, and the readers of agricultural papers should always be ready to furnish such the reasons for their belief. Those who oppose green manuring found their objection upon the single proposition that the plant obtains its food, and as a result its substance comes entirely from the soil, and therefore when the plant is returned to the soil only that which has been taken away is given back. The argument of itself is sound, but the premises upon which it is founded is false, hence the conclusion is erroneous. Plants do not get all their food from the soil by any means. The leaves eat and drink. They are not only organs of transpiration, but of respiration also. The gases which they take up have a part in the building of the plant. This has been so well demonstrated by scientists that I shall at once proceed to the next point which is not so well understood. It is contended that all that which the roots take up is certainly got from the soil. But right here we must make an important distinction between deep and shallow feeders, and a different one from that popularly understood. In a certain sense all our cultivated crops may be assigned to one or the other of these classes, but this is not the point which I desire to make. In a certain sense these plants are all shallow feeders, because they feed mostly from the fine, shallow layer of soil. Their roots are of such a character that they will not feed largely from solid, unstirred, unfined ground. This is conclusively demonstrated by their failure to make the usual growth on ground which has not been stirred. It is to pander to this taste of their roots that we prepare the seed bed and cultivate the ground. But it is not so with clover and some other plants. We do not stir and fine the soil for clover because its roots are of such a nature that they penetrate hard ground in search of sustenance. And they penetrate deep. The roots of a matured clover plant extend to a depth of from four to six feet. From the elements found at this depth even more than at or near the surface the plant builds up its structure. It thus happens that more than one-half of the substance of clover which is derived from the soil is taken from a depth almost entirely beyond the reach of our cultivated farm crops. And when this is returned to the soil by green manuring it is added to the upper stratum of soil, where it can be used by farm crops. This is why green manuring enriches the soil for farm crops in both those elements derived from the air and the earth. It is best to combine pasturing and manuring because you thus get not only the value of the flesh formed, but of a large amount of fertility which is added.—*J. M. Stahl, in Farm and Garden.*

#### Grasses for the South.

Mr. William Saunders says on this subject: "One of the greatest wants in Florida is that of food for live stock. Northern grasses and clovers are of small value; they are not adapted to the climate. Lucerne, *Medicago sativa*, has the reputation of succeeding well

in warm climates, and would doubtless flourish in the rich bottom lands when once they are fitted for culture. This being a perennial, noted for a propensity to send its roots deep into the soil, would be almost as permanent a plant as the dwarf Palmetto, and infinitely more useful. Lucerne is one of the most ancient of cultivated plants, and as a forage plant for dry, warm climates has always been held in high estimation.

"Among rapid growing grasses none excel the Italian Rye Grass, *Lolium italicum*. Seeds of this grass, sown in November, would produce a crop fit for cutting in April for hay. The winter season being also the dry season would be so far unfavorable to continued growth; but the want of rain could be met by a proper selection of soil. The worst selection would be high and dry fields; the best, a thoroughly drained swamp.

"But I look upon the Johnson Grass, *Sorghum halepense*, as having greater prospective value than either of the plants named. In Alabama, and in other of the Southern States, it is proving to be one of the best grasses for hay or for feeding in the green state that has been so far introduced to cultivation. This grass has long been known, but its persistent growth, and the difficulty of eradicating it from the cultivated fields, caused it to be regarded as a nuisance. Its greatest fault is its greatest merit.

"A few days ago, in Polk county, in conversation with an Alabama farmer, I asked him what he found the most profitable crop to raise in that State. He promptly replied hay. To the further question as to what grasses he cultivated for this purpose, he answered the Johnson grass. He stated that he made three cuttings yearly, and from these his returns averaged five tons of hay from an acre. This is grown on good bottom land, and all the cultivation it receives is to plow it down once in two or three years; then give it a very thorough harrowing, and an increased growth ensues. A portion of the roots are thus destroyed, which prevents them from becoming too thickly matted, keeps up the fertility, and increases the growth. It would seem that a plant so well adapted to a warm, sunny climate will ultimately prove of great value all through this southern country."

#### Spreading Manure.

The hay rake will be found a most useful implement where meadows or pastures are top-dressed, especially if some considerable portion of the manure is a little long or lumpy. Spread as evenly as possible from the wagon, and then put on rake and go over the ground thoroughly in at least two directions. It is surprising to what a degree it will break up and thoroughly distribute the manure. We remember to have once gone over a meadow in this way, where some of the manure was long, and the rake pulled it and rolled it over among the stubble until it fairly seemed to wear it out, and there did not appear to be a place as large as a man's hand anywhere in the field which did not have some portion of manure upon it.

The rake covers the ground very quickly, for when the rake is so employed the horse should be kept at a rapid gait, and the expense is merely nominal, and we believe it will always pay to use it after top-dressing. Of course, if it gathers up anything in the way of long stuff which can be collected in winrows that should be gathered up with the wagon and hauled back to the compost heap, to prevent its fouling the next crop of hay. And this last consideration should always be kept in view in top-dressing meadows, for there is considerable danger of it, unless these manures should be well decomposed or are quite short and fine.—*En.*

#### Live Stock and Dairy.

THE MARYLAND IMPROVED LIVE STOCK BREEDERS' ASSOCIATION held its annual meeting on the 13th instant. The report of the board of directors showed the work of the association to have been satisfactory last year. There are now sixty-five active members. The Committee on Contagious and Infectious Diseases reported that they had prepared a law for the suppression of these diseases, which had been introduced into the House of Delegates and was now before the Committee on Hygiene, and it is thought that the report from the committee will be favorable. The fact that Congress has before it now a bill similar in tenor, which will require the enactment of laws by the State legislatures to become operative, and that this act before Congress provides that if the States fail to make such provisions, cattle may be quarantined and not allowed to pass outside their bounds, has satisfied many members of the legislature that the provisions of some such bill as that provided by the Breeders' Association was necessary to protect the cattle trade, as it is thought that the feeling heretofore shown in the Western agricultural press renders the quarantine of Maryland, should the legislature fail to pass the proper law, a moral certainty. The board of directors elected for the next year were:—Alexander M. Fulford, Harford county; E. B. Emory, Queen Anne's; J. F. McMullen, Howard; Wm. H. Whitridge, John G. Clarke, John E. Phillips, Charles K. Harrison, E. G. Merryman and T. Alexander Seth, Baltimore county. After the adjournment the board of directors met and elected Mr. Fulford, president, Mr. Whitridge, corresponding secretary, and Mr. T. Alexander Seth, secretary and treasurer.

#### Breeding for Beef.

A correspondent of the *Breeders' Gazette*, commenting upon the object and effect of offering prizes at fat stock shows, says: We are told that these prizes, and those for the largest bullock in the show, are designed to let the public see 'what can be done.' But the managers of organizations for the exhibition of the useful products of our agriculture, ought to have some higher purpose than to gratify a curiosity that is attracted by these unprofitable monstrosities. The aim of the intelligent breeder in the rearing and management of beef cattle should be to produce the largest weights at the earliest ages, that meat of choice quality may be grown under such treatment as good farmers can afford to bestow.

The Short-horn is the earliest maturing breed, and in Great Britain steers of this blood are usually in the market when twenty to twenty-two months old. At these ages they may be forced to enormous weights—say sixteen to eighteen hundred pounds. But the carcass, with the enormous percentage of fat produced by this expensive pampering and forcing, besides being unprofitable to the producer, is found to be impaired in flavor and less juicy than beef made ripe by the ordinary methods.

It is believed that, all things considered, the most satisfactory results are obtained when the farmer has his steers ready for the market at the age of about thirty months, when they may, without any expensive forcing, be made to weigh fifteen to seventeen hundred pounds, live weight, of meat of the first quality. To accomplish this, the treatment may be as follows: The calves should have say one-half the milk of their dams until five months old, being fed of course on the best of grass, and having a little bran, with shorts or meal, as they are weaned, with a liberal allowance of grain or meal in winter. The last summer's grazing will be found to produce wonderful results in increasing the weights and finishing off the bullocks, especially if, as soon as our corn

is in roasting ears, we cut up and give a light feed daily on the grass for a month or two before they are turned off. Nothing pays better than this practice of feeding the corn before it is fully hardened.

These cattle will make ripe, juicy and well-flavored beef, while the fat will not be so abundant as to diminish the salable value of the carcass.

It is true that the percentage of gain per month diminishes as age increases, as does also, other things being equal, the proportion of gain to cost; but when we take into the account the fact that to force an animal to these weights eight or ten months earlier requires a treatment that farmers are not able to bestow, and is attended with greatly increased cost, while the quality of the flesh is impaired, we see that the system we have recommended is not only practicable but profitable to the grazier, the feeder, the butcher and the consumer, while under the other system the result too often is a losing business all around.

#### A Chapter on Butter.

(From our Paris Correspondent.)

THE RECENT DAIRY SHOW at Caen has drawn attention to the most improved processes for the preparation of butter; notably, as to the manner of skimming, the stage at which cream ought to be churned, and whether the butter ought to be kneaded with hand or instrument; washed, or merely subjected to mechanical pressure. Another question has been raised at the same time, whether it is more profitable to convert milk into butter or cheese. A small farm of fifty acres cannot very well, it is argued, invest in cheese-making; that is a commercial speculation necessitating the association of several farms, and capital.

The origin of butter is unknown, yet nearly all languages retain in the radical of the word the equivalent for agitation or churning. Butter is a fatty, oily substance, held in suspension in milk, and that rises to the surface by its lesser density. It brings up with it serum and caseine; the whole forms cream. Churning allows the butyric particles to agglomerate; washing and kneading expel the milk and caseine, the latter especially, as being azotized, it induces rancidity or fermentation. Broméls says butter is composed of five different substances: Oleine, 30 per cent; margarine, 68; butyric, caprine and caprine 3 per cent. Fourcroy ranks butter as an animal oil, and that it owes its solidity to a certain portion of oxygen. It is preserved when salted or melted, because such operations destroy the caseine which is the putrescent element. Butter possesses all the nutritive and digestible properties of fat, and Soabeiran observes that it is by its odor, distinguished from all other fats. The latter are formed by setting; butter, from agitating.

Butter made from sheep's milk is fatty, of a pale yellow color in summer and white in winter; it preserves badly. Goat's butter is white, keeps better than sheep's, but has a bad taste. That prepared from asses' milk is white, soft, tasteless and difficult to extract. The qualities of good butter are: a mild, agreeable and slightly aromatic taste, sufficiently firm to be cut in thin slices; color, yellow shading into orange. Bad butter contains caseine and is white and cheesy. "Run" butter is butter clarified, melted and potted for use; in India, "Ghee" is the name given to this preparation.

The Scythians, and through them the Aryans, the Greeks and the Latins, must have known butter, as they had numerous flocks and herds. The Romans only employed butter—they favored oil—as a medicament, similarly as was the use of sugar in the middle ages. Robinson states, butter is in use in the present day in Palestine, and as practices are slow to change in the East, it may have been so for centuries. Accord-



ing to Buckhardt, the Arabs apply butter to different uses. In the Orient, however, butter is frequently confused with a kind of milk curdled by acid or leaven, and offered to travellers—it is a household dish.

Good butter is closely connected with good milk, and the butter in turn with the food and the breed of cattle. The centrifugal process of skimming milk, and its immediate churning, demand time and testing before becoming an institution. Hence the process remains of setting the milk and churning either the whole contents of the vessels or merely the cream. Soured cream yields a butter more abundant, but its quality is inferior. This is the case with Bretagne butter, the crocks are kept in presses and wardrobes, accumulating dirt and offensive odors.

The time necessary for churning varies with the season, that is to say, the temperature. When the butter is slow in gathering, or bewitched, many persons add some lemon juice or brandy, but this tells on the quality. In Berry and Normandy, many farmers place the cream in linen bags, neither too coarse nor too fine, and bury them two feet in the ground, covered well up, for twenty-four hours. When taken up the cream is in the form of a block; this is broken with a wooden hammer, the buttery particles alone separate, and a wineglassfull of water will unite them. The washing of the butter is a vexed question; in Normandy, such is effected several times in the churn, and afterwards rolled with bats. Equally first-class butter is turned out by substituting pressure for washings, and the aroma is in both cases excellent.

#### Winter Dairying.

For the South we would, by all means, advise winter in preference to summer dairying. The long and dry summers of the South are unfavorable for summer dairying. The grass, in midsummer, ceases to grow, and withers and dries up, the streams and springs fail, the heat of the sun is oppressive, and flies are troublesome. If cows are ever to go dry, this is the time for them to do so. In the mild Southern winters, all this is reversed. By beginning at the close of summer, the fall, winter, and spring afford a good and continuous milking season. Grazing runs late into the winter, and begins early in the spring. The season for foddering is so short that, if cows are provided with green cut fodder, preserved either by deacidation or in silos, the winter makes no diminution in the flow of milk, especially if helped along with roots. In this part of the year water is most abundant, heat ceases to oppress, and flies are out of the way, and the cows are accorded a season of comfort, so necessary to profitable lactation. The cold winter, with comfortable quarters and green-cut food, interferes less with milk secretion than a long, dry and hot summer. In the winter, too, milk and all its products are more valuable than in summer. In the North, where the winters are long and severe, and the summers comparatively short, dairying in winter is more profitable than in the summer. The preponderance of summer creameries is not from greater profit, but solely from the force of habit. If the South would break away from time-worn habits, and change the season of active operations round into the cooler instead of the hotter part of the year, there is no good reason why dairying may not be profitably carried into the warmer climate, to enhance the welfare of individual farmers, and to augment the resources of the South by the introduction of a new and large and profitable industry.—*Nat. Live-Stock Journal.*

**MR. SHOEMAKER'S BURNSIDE PARK HERD.** A recent addition to this herd is the heifer Lily Langtry, 17995. She is a solid fawn, with black points, a g. g. daughter of Coomassie.

The famous cow, Princess 2d, recently fresh, has been undergoing a private trial of her butter-making qualities, with the most satisfactory results, which, however, will not be published until another and official public test, contemplated shortly, is completed.

#### Horticulture.

##### The Orchard and Fruit Garden.

Where any pruning is necessary in the orchard, the mild weather of this month is an excellent time to give attention thereto; if large limbs are removed, the wounds thus made should have a good coating of grafting wax. However carefully bearing trees are annually looked after, and crossing limbs and all excess of growth removed therefrom, it still will occur, by the drooping tendency that a large crop of fruit gives the trees, that an occasional large limb must be removed, such as leaves large wounds, which if left exposed to the weather with its endless round of changes, will soon begin to decay and result in injury to the trees. The more scientific orchardist holds out stoutly for low-headed trees, because the fruit is easier to gather—the trunks shaded and less liable to sun-scald—the soil is shaded immediately over the roots, and its temperature thereby guarded against extremes, etc., etc.; but my observation prompts the remark, that it will require a vast amount of such preachings, to convert the average orchardist—or perhaps better say fruit grower to this belief. The orchard must be tilled or cultivated, says the latter, and to spade or work around by hand labor is wholly impracticable, under the present disordered condition of the labor question; head the trees a little higher and do all the cultivating by horse power is the less pretentious "order of things" in the arrangements of the orchard with the other class. Which grows the best fruit and the most of it? 'That's the question.'

The cuttings of grafts for the coming spring use, should not be longer delayed; cut, tie and mark carefully, wood of last season's growth only, of such varieties as are desired, and either pack in damp sawdust, in a cool cellar, or bury eight or ten inches deep in the ground, until time to use them arrives.

Cuttings of grape, currant, gooseberry, etc., can yet be made, but the pruning of grape vines should have early attention.

The readers of THE AMERICAN FARMER have been frequently told that the best time to prune grape vines is during the fall, as soon as is practical after the falling off of the foliage; but of course they all have many other cares, and the vines sometimes escape their notice; to such the mild days of this month will present opportunities that should not be slighted.

How shall I make cuttings do, you say? Cut the canes in pieces from six to eight or ten inches in length. Use a sharp knife; the end of the cuttings that goes into the soil should be cut close up to the bud, each cutting to have two or more eyes or buds, owing to the distance they are apart; the top end should not be cut off closer than say, within an inch of the bud; tie in bundles of twenty-five each, (using willow to tie with if you have it.) Mark each bundle, bury them butt ends up, covering same as recommended for grafts, until weather is settled and ground in good condition, and then get them out. Some good authorities say they should be set in a slanting position, but I find them to do quite as well if set perpendicularly, and they are much nicer to work with hoe or cultivator.

If there are any apple, pear, cherry or plum trees about the garden or orchard, the fruit of which is unsatisfactory, graft them with other good kinds. There is but very little art in grafting; if you have never done it, try it, you will be surprised to find what a change a day or so of this kind of labor will bring about. I don't advise the cutting away of the entire top of your trees in the experiment, but a few limbs on a tree, the loss of which, in the event you should "not at first succeed," will not materially affect

the vigor and appearance of the tree thus operated on. Don't be too scientific and preface your experiment with a long study of the suitableness of the stock; the influence it will have on the graft, etc., etc.—apple on apple, cherry on cherry, etc., is about all the preface needed.

By the way, Mr. Massey, in his pleasant article on page 39, (so long delayed), makes an assertion in relation to the influence of the stock on the bud, that prompts me to enquire what injurious influences on the bud or fruit, if any, is caused by the indiscriminate use of seed? that is seed from healthy trees of course. I know that Col. Wilkins, while living, did at one time advocate the plan of using seed of early varieties for stocks on which to bud early kinds, and that, say a medium season peach, should be worked on stocks from seed of medium season kinds, and that the variations in kinds, as to the season of ripening, was due to the mixture of seeds of fruit of all seasons, etc., etc. In a conversation with Mr. Wilkins, (three or four years prior to his decease), he discussed this subject in detail; I could not however agree with him, because many practical facts in my own experience tended the other way. I came home determined to give the matter a fair test, and as soon as subsequent thereto as was practicable, saved seed carefully of Troth's Early and of Heath Cling, keeping the two kinds separate and pure; at the proper time the seed was planted, marked, and in due time the stocks therefrom were all bedded with Troth's Early. As soon as the trees from this budding were ready, I planted six of those bedded on Troth stock, and six of those bedded on Heath stock, on the same kind of land, made a record of it, so that no guess work should enter into the experiment. The trees have since borne two good crops, and I would love to see the man with science enough in him to point out any difference in the growth of the trees, the appearance of the fruit, the season of ripening, or tendency to cling to the seed.

There are many other facts that I have not time or space to enumerate here, that tend to disprove the theory wholly and entirely; yet, if Mr. Massey has any experience that justifies his endorsement of it, I would be much pleased to know what it is, as I well know, and freely admit that I have much yet to learn about the management and propagation of peach trees. J. W. KERR.

#### Commercial Horticulture on the Peninsula—Its Progress and Possibilities—No. 3.

In my boyhood days, the farms all over the Peninsula usually possessed ample orchards of apples—many of these were long-keeping winter apples of great excellence, and unknown elsewhere. But year after year these old orchards succumbed to the attacks of insects, old age and an impoverished soil. The old varieties were neglected in new plantations, and sorts introduced from the Northern nurseries which were unsuited to the climate, until finally it is hard to find a good keeping winter apple on the Peninsula. The whole community seemed to settle down into the conviction that winter apples could not be grown at home, but must be brought from the North. In some sections of late years there has been a decided change for the better in this matter, and the home nurseries, particularly that of Mr. Kerr, in Caroline, are devoting their attention to the old native sorts of apples which formerly did so well. That apples can be profitably grown on the Peninsula has been of late demonstrated in a number of instances, particularly when proper attention has been given to sorts known to be adapted to the climate. Growers are realizing that fruit trees need feeding as well as grain crops, and the tendency is towards reduced areas and better treatment. It is much to be feared that some of the fine old apples formerly grown

on the Peninsula have been suffered to disappear entirely. In the lower counties the best winter apple of former days, and one of the best we ever saw anywhere, was a variety known as "Winter Grixon," a little juicy apple, that to our taste was far superior to the dry mealy sorts grown at the North. Our old Eastern Shore Maiden's Blush was a different and much superior sort to the apple known by that name in the Northern nurseries. And an apple known in Somerset Co. as "Ballard," or Island Apple, is to our taste the best late fall apple in existence. Now that the apple is beginning to receive increased attention on the Peninsula it would be well for growers and nurserymen to hunt up the old apples before they entirely disappear. With the increased culture of the apple, and the pear, fruit growing on the Peninsula is receiving more study from intelligent men, and the rewards to the successful growers of these will be greater than those of the peach growers of the past, since these fruits demand more intelligent care than was bestowed on the speculative peach plantations of the past.

The insects which have largely aided in the destruction of the old apple orchards are still with us, and the experience of the Northern growers will be of use to those who have to fight the canker worm and codling moth on the Peninsula hereafter.

The pear blight fungus is ever with us, in its dormant form, though several seasons frequently pass without a serious outbreak. The cure or prevention of the pear blight has as yet eluded the investigation of practical and scientific men everywhere, and we can only recommend that treatment which we have found to render the trees least subject to its attacks.

Experience has shown that in planting pear orchards on the Peninsula the best plan is that which was long ago adopted by a few successful growers in the upper counties. That is, set the trees ten (10) feet apart each way, planting dwarfs of approved sorts alternating with the standards. In this way the dwarfs become profitable before the standards get to fruiting, and being shorter lived, will usually be out of the way by the time the standards need the whole twenty foot space. Pears succeed best on a stony, well-drained, red clay soil, and for the first few years should be kept cultivated clean, and receive little if any manure. After the third year the land should be set in grass, and kept mown as short as a lawn, and should receive an annual top-dressing of fine manure in autumn.

As to pruning, do as little of it as possible; a little watchfulness during the growing season, to stop rank shoots, by nipping the point with thumb and forefinger will save much pruning. Above all, avoid the effort to make all pear trees pyramids. Some grow naturally in this shape, but the effort to make a Bartlett grow like a Sheldon is only a waste of time and fruit. Study the natural habit of the tree, and let all pruning be directed towards making a well balanced head of the shape natural to the variety.

We may be wrong, but we are strongly of the opinion that the pear is yet destined to be the leading fruit crop in all parts of the Peninsula, on high well drained soils. The superiority of the fruit, grown in the orchards of the upper counties is such that I have never known it to fail to carry off the prizes at all shows, where it has come in competition with the best grown of other sections. With fruit grown in Kent Co. the writer once carried off the first prize, where among other competitors were the Hoveys of Boston with sixty-seven varieties, and so superior were my pears to those grown in New England that an inexperienced observer could hardly believe that many of them were the same varieties. As with the apple so it is in a lesser degree with the pear on the Peninsula. There were formerly many old sorts



which we have never seen elsewhere, and which bore surprising crops of great excellence. We hope that the old "Catlin" pears, which used to be plentiful in what is now Wicomico Co., are not yet extinct, and that some of our nursery friends on the Shore will undertake their propagation. To our youthful taste no Seckel ever tasted half so well, and the fruit was withal more handsome. The problem for the pear grower of the future is the improvement, ripening, and preservation of winter pears. Our fruit growers are farther behindhand in this than in any other department of fruit growing, and a well ripened and well kept winter pear is a rarity.

W. F. MASSEY.

#### A Half Dozen Good Varieties of Winter Apples.

Last year Mr. J. Fitz, of Virginia, furnished THE AMERICAN FARMER with a description of the "Peach Ridge" apple: grafts of which he had kindly sent me three or four years before, and which having been used in the nursery, exhibited such remarkable vigor in their growth, in comparison with many other kinds under precisely the same treatment, as induced me to watch with more than ordinary interest their progress as they developed into trees. Two thrifty natural trees, four years old, were top-grafted with the scions obtained from Mr. F., and the following fall were transplanted carefully, grown right along, apparently but little checked by the removal; and are now two of the handsomest apple trees on my grounds, produced a few nice specimens of fruit last year, and if these apples, to any extent, index the future of the variety for the "Eastern Shore," it will certainly be popular as a good keeper; January more than half gone, and they are as solid as when pulled from the trees.

MOULTRIE'S WINTER, another variety that fruited for me the first time in 1893, is an apple that I am very much pleased with, although the tree is of crooked and straggling habit, much like the old "Grindstone" in this respect; the fruit is so fair, smooth and solid, that the defects in the style of the tree are thereby fully compensated for. The fruit as grown on these young trees, is above medium in size, with about three-fourths of the green ground of the skin faintly striped with red, not as flat as the "grindstone," tapering slightly toward the apex; at present writing, the specimens I have, look as though they would keep in good condition until spring.

CORVAX'S SEEDLING, is the name given to some grafts obtained, five or six years ago, from a Georgia nurseryman of good repute for correctness, but which I fail to discover in any Southern catalogues in my possession; neither is it described in either of the appendices to Downing's "Fruits and Fruit-trees." The tree is a strong, upright grower in the nursery and orchard, an early and annual bearer; fruit small to medium in size, color somewhat similar to Yates, minus the numerous little white dots, which help to beautify the latter, sweet and good when ripe, but oh! how tardy it is in reaching that condition, as I have kept them solid and clear of shrivel, until the first of June. As a keeper, I cannot see how this variety can be excelled.

ELLA PARK, is a name given by a nursery firm in Missouri, to an apple which they described as a new and distinct variety; but time has disclosed, that this firm is either very deficient in knowledge as to what constitutes a new variety, or that they employ methods reckless and unreliable in their nature, in the cutting and labeling of grafts which they sell; and as I obtained at same time (from same firm) grafts marked "Stonewall Jackson" and described by them as a new Southern variety, valuable as a late keeper," which turned out to be "American

Summer Permain," I incline to the belief that it was their method or rather lack of method, in cutting and marking. The Ella Park, proves identical with the Lawyer, which however combines many qualities, entitling it to the front rank here as a truly valuable, long keeping variety—large size, bright red color and productive, superior to the Winesap, not only in size and color, but also in flavor and keeping qualities.

STEVENSON'S WINTER, is medium size; color, green with a dull blush on exposed side, inclining to conic in form, and good quality; the trees are early bearers, and quite prolific, seem to succeed well on light soil; does not make as handsome a tree in the orchard as some varieties, but I regard it as a valuable winter variety for southern Maryland. It is from the far South.

McNASH, is a native "Eastern Shore" variety, and is as handsome, straight and upright in growth, while young, as a Carolina poplar, makes a beautiful tree in the orchard, and comes into bearing young, but does not yield heavily until trees attain fair size, then fed fair, nice fruit, above medium size, yellow, sometimes faintly blushed, of very good quality. I will match the McNash against the best grown.

J. W. KERR.

#### Cultivation of Small Fruits.

At a recent meeting of the Massachusetts Horticultural Society, in a discussion upon small fruits, as reported by the *American Cultivator*, E. W. Wood said: There are two classes of growers, those who grow for the market and those who grow for family use. For the latter purpose the varieties of the finest quality should be selected, though they may not be so prolific as those grown for market.

The speaker recommended from his own experience and observation the following list of STRAWBERRIES for market (which are placed in the order of their value), though another cultivator near by might recommend quite a different list: Downing, Sharpless, Hervey Davis, Cumberland, Miner's Great Prolific, Manchester, Wilson and Crescent. The Downing is the most popular everywhere, being larger and of better quality than the Wilson. Three years ago it rusted and the speaker lost a large portion of his, but since then he has seen no rust. The Sharpless is comparatively new, and has proved desirable both for market and home use; it is the largest strawberry of good quality. The Hervey Davis has been tried for ten years, and has come to stay.

Strawberries are bought by consumers more ignorantly than any other fruits; they know something about the varieties of pears, but they buy strawberries by their looks. Mr. Wood asked a dealer in Quincy Market if there was no way to make the varieties of fine quality pay, and the dealer replied that until last season he had been unable to accomplish anything in that direction, but a grower who had a large quantity of the Hervey Davis, and wished to get the best price for them, asked him to call the attention of his customers to them, and he did so, with the result that soon all his supply of this kind was engaged a day beforehand, not only by consumers, but by other dealers.

The Cumberland and Miner's Prolific are generally grown on a large scale in Concord and its vicinity. The Manchester is a new kind, of vigorous growth, but the color is not good and the hull is so deeply planted that it is difficult to remove. It is not suited to amateur culture. On light soil, a little dry, no kind will produce so much as the Wilson; it looks well and brings a good price before it is ripe, and is marketed in that condition. When fully ripe it is as dark as the Agriculturist and is of fair quality. The Crescent is claimed to be the lazy man's strawberry; it is of not large size, and the quality is not better than that of the Wilson. It is only desirable for the money it

will bring when no other kind is in the market. A grower in Belmont gave his Crescents to his neighbors, and marketed his Hervey Davises.

For amateur culture, Mr. Wood recommended the Hervey Davis, Wilder, Seth Boyden, Hovey, Jucunda and La Constante, in the order in which they are named. The Hervey Davis is not so profitable as the Downing or Sharpless, but has great vigor, which it retains through the season; it stands up well in drought, and comes out well in spring, and continues long in bearing. The Wilder is of the finest quality, but has not proved prolific under all conditions. The Seth Boyden is of good quality, and keeps well after picking. The Hovey fails to do what it formerly did; like the Brighton, they seemed to be all gone after the first picking. The Hovey makes many barren plants, and does not produce the quantity it did twenty years ago. The Jucunda does best on heavy clay soil, and requires high cultivation, when it is handsome and of excellent quality and fairly productive. The Constante is the standard quality, and, when well-grown, almost invariably takes the first prize, but it is not reliable for a crop. Many are induced to grow it from seeing the specimens shown, but not giving it the extra care it needs, are disappointed.

In regard to the culture of strawberries, the best land for English hay is good for strawberries; no crop feels drought quicker than strawberries; and the first continuous dry weather comes when they are maturing. The large Belmont growers take but one crop, planting vegetables between the rows the first year and plowing in the strawberry plants and planting vegetables as soon as the crop is gathered the second year, thus getting two crops of vegetables and one of strawberries in two years. For families they are generally grown in plats, and, as it is difficult to fertilize them after the ground is covered, it should be put in the highest condition before the plants are put out, giving all the manure possible. If fresh stable manure is applied, then it will be in condition for plant food by the time the runners spread.

The speaker plants his rows three feet apart, and the plants eighteen inches in the row, and lets them run the first season. The large growers put the rows four feet apart, and cut off the runners so as to leave paths between; but for family use they can be picked from beds with but little injury to the plants. When the season is over he digs in the plants, so as to have beds three feet wide with three feet spaces between, and they will give nearly as good a crop as the previous year. The third year they are all dug under, for it is more work to weed them than to set a new bed.

RASPBERRIES are not so generally grown as strawberries. They are protected with more difficulty, but statistics show that they give more money from the same ground. The Franconia is one of the oldest and best known kinds, and takes the most prizes. The Herstine is generally grown for market, though the Cuthbert is reputed more prolific. The Clarke is as hardy as any; he grew it for seven years without any protection, but then lost it entirely. The Saunders is of the finest flavor, but too soft to be desirable for market. The McLaren's Prolific was shown for the first time last season; it resembles the Hornet and is of good quality, and reported by the exhibitor to be vigorous and productive, and the best in every respect he has ever grown. Of Black Cap raspberries the Souhegan and Gregg are best.

Of CURRANTS, the Versailles and French Transparent have taken the most prizes. The speaker esteems the Versailles the best red currant. He had found it productive, the branches being bent to the ground with the weight of fruit; but a Belmont grower recommended another variety as more productive. This was obtained from the Cushing

place in Belmont and is generally cultivated in that vicinity. The currant can be grown profitably in a pear or apple orchard, between the trees in the rows, and will return enough to pay for cultivating the whole orchard. The French Transparent is distinct from Dana's Transparent; the former is as large and handsome as the latter, and of better quality.

The last season offered the best exhibit of GRAPES for several years. They suffer less from drought than other fruits, and the long continued dry weather gives the fruit the finest quality. But such favorable seasons lead people to set out varieties that will disappoint four years out of five. If we name the Concord, Moore's Early, Worden and Delaware, we have come to the end of those that can be invariably relied on. The Brighton is most excellent, but sometimes mildews and is an entire failure. The Eumelan is less shown than any other equally good grape; last year they were as good as outdoor grapes could be. Of Rogers's hybrids, the Massasoit and Wilder are among the best; the Lindley is less productive, but when in perfection is as good as any foreign grape. If the Francis B. Hayes continues as good as last year, it will be unquestionably the best white grape. The Prentiss is not grown as much as it should be. The Pockington was not ripe when shown at our annual exhibition last year.

For New England we must require earliness. The Concord fails to ripen once in four or five years. Dr. Fisher, one of the best cultivators, lost his crop twice in twelve years. Mr. Wood closed with the remark that the subject before the meeting was of the highest importance. He was surprised that every family does not have a plentiful supply of small fruits; they are more valuable for health than the services of a physician, and are associated with the pleasantest memories of childhood.

#### Pear Blight.

In an experience of over thirty years I have had an opportunity of observing many thousands of pear trees under different treatments both on the Peninsula and in various parts of the Union, from the far North to the beautiful pear-growing neighborhood of Natchez, Miss., and I have noticed that, in every situation, the Pear blight develops much more frequently and destructively on trees growing in heavily manured and cultivated soil, than on trees in a properly managed sod. These are facts, derived, as your correspondent N. F. F. would say, "from personal practical experience," and without "a microscope of 3,000 to 4,000 magnifying power." I have also devoted much time to the study of microscopy, and have directed special attention to the fungi which infect our fruits and cultivated plants. I have used in my studies a microscope of much greater power than N. F. F. "can scarcely conceive of a gardener possessed of," but which I own nevertheless, and know how to use. I make this statement not boastfully or with any intention of depreciating the value of the "personal practical experience" of N. F. F. whose initials I recognize as those of a skillful and observing gardener, who probably knows as much about the cure or prevention of pear blight as any one else. I perfectly agree with him as to the treatment of affected trees. Cut away the blighted part and burn it at once, and when a tree is killed entirely, dig it up and burn it and plant two trees for every one that is killed. But I would like to ask N. F. F. how he is to avoid injuring the roots of pear trees with the plow in summer if he is compelled, as I am, to grow all his vegetables among his trees, and to keep the land under crop the whole summer.

W. F. MASSEY.



## Views of a Delaware Man on Peach Growing.

Mr. B. B. Allen, a well-known business man of Smyrna, Delaware, was in Easton, Md., two days lately. In conversation with a *Ledger* reporter he talked, of peach culture, and of the impetus the peach business took last year. About Smyrna, where land brings from \$100 to \$150 an acre, peach culture is thoroughly understood.

"In a radius of twelve miles from Smyrna," said Mr. Allen, "more peach trees have been set out this year than have been planted the last dozen years altogether. People who look into things and know what they are about see that every year there is going to be a wider market and a greater demand for peaches. The new processes of handling the fruit in evaporators, &c., makes a great change in the peach market to the benefit of the peach growers.

"Messrs. Davis & Knoll, the purchasers of the tract of land near Kenton, which Messrs. Goldsborough & Johnston, of Talbot, sold recently, intend to make a peach farm of it. Nobody who has land is afraid to plant a peach orchard in our section. I see no reason why peaches cannot be grown as successfully and profitably on your Talbot land as anywhere in the world. Peach culture requires care and strict attention. You must know your business. Certain soils require certain varieties of fruits."

Mr. Allen told of Capt. Andrew Woodall, of Kent, who had a peach orchard that had been bearing about fifteen years, and was apparently played out. He applied to the ground kainit, or German salts, three hundred pounds to the acre, and cut the boughs of the trees off close to the trunk. They put out new wood, the trees became vigorous again, and Capt. Woodall got several more crops from that orchard.

## Dwarf Pears on the Peninsula.

A writer in the *Home and Farm* on this topic, gives his views, which are good ones, in the following manner:

## DWARF PEARS.

Very little pruning is required, except to cut off the gourmand branches and those that crowd too much—keep out dead branches, and shorten the terminal ones when they forget to stop growing at the right time. No branch should be allowed to grow more than two feet in one season without being cut down to that, if the greatest amount of fruit that can be grown and a healthy tree are desired.

I am frequently asked what I think of dwarfs?

From my own observations and experience, after setting out several thousand dwarf pears and having had them in bearing for several years, I am not opposed to dwarf Duchesse d'Angouleme or dwarf Doyenne d'Eté. All others, with me, have proved unprofitable. They come into bearing sooner than standards. More pears are produced the first ten years; and if they lived no longer will very generally prove a profitable investment.

Some of my dwarf Duchesse when planted six years produced me four baskets to a tree. My standards are planted twenty feet apart each way, with dwarfs between them each way, making three dwarfs to one standard. My dwarfs produced hundreds of baskets before the standards began to bear to any considerable extent. Last year I removed nearly one thousand of the dwarfs, which began to fail, to give the standard a better chance. My standards, now eleven years planted, produce several baskets—from three to six—to a tree.

I should adopt the same plan again were I to set another pear orchard. The dwarfs will more than pay all expenses before the standards bear, and without injury to them.

## VARIETIES TO PLANT.

With varieties running into hundreds, there are only a few that can be recommended for profitable culture. Some rot at the core before they are fully ripe, others drop their leaves before the fruit is mature, leaving it insipid and withered, others blight. It might be profitable to dwell on the peculiarities of different pears, but for the present I will only suggest that the least objectionable of the varieties, and those that do the best in Delaware, as well as generally are (1) the Bartlett; (2) Beurre d'Anjou; (3) Duchesse d'Angouleme dwarf; (4) Lawrence; (5) Flemish Beauty; (6) Howell; (7) Louise Bon de Jersey; (8) Seckle. All these are standard except Duchesse, which does finely as a dwarf, as does also Doyenne d'Eté, No. 9.

## TIME OF RIPENING.

Number nine is very early—my earliest—very small but rich and melting; commands a high price. Number one ripens next; comes in the flush of peaches, consequently when the peach crop is large the price is low. Number five comes next. Number seven about the same time with number five, also number six. Its large size sells it. Number three and eight ripen about the same time. Number three ripens later, and number two later still. Number four ripens in winter. Winter Nellis and Easter Beurre are among the best, if not the very best, winter pears. The Vicar of Winkfield is a great bearer, a late keeper, only fit for pies, and yet it sells well. Its main fault is premature falling. I have many other varieties growing as amateur, but the above list with the remarks submitted, will enable any one to make a good selection without much chance of a failure. Other pears do well in circumscribed localities. Nurserymen or tree agents are constantly extolling new varieties as the pear *par excellence*. They may be right, but as a rule it is safer to let amateur growers try them, especially when sold at fancy prices.

The practical fruit grower had better depend on well proved varieties. All the varieties named have a good reputation, and have been grown successfully in a large number of the States.

The Bloodgood has a high reputation in Maryland, around Washington, in Ohio, Illinois, Nebraska, and South Carolina. Beurre Superfin, in Massachusetts, Maryland, South Carolina and Georgia. Doyenne Boussock, in New York, New Jersey, Massachusetts, Ohio, West Virginia, and Nebraska. The Beurre Gifford, in Maryland, Kentucky, and Nebraska. Clapp's Favorite, in all the New England States. Chambers, in Kentucky only. Mt. Vernon, in New Hampshire and Massachusetts. The Elizabeth (Manning's) has lost prestige in every State where once popular, except New York and Maryland. The Tyson is gaining in favor in the South and West.

It will pay any man who contemplates planting a large pear orchard to visit personally the locality where pears are successfully grown and are in bearing, note the character of the soil and the appearance of the growing tree. Soil and inclination will greatly modify the habits of the pear; some varieties more than others. I have known a variety to be a perfect success in one locality, and ten miles—yes, three from it—in different soil, with a different inclination, to be an entire failure.

It is much safer to deal with nurserymen of good reputation or their accredited agents and follow their advice, than to take counsel from tree speculators or vendors, peddlers. These may be honest men, but as a rule they are, as some say, "mighty onartain." I can point to scores of cases where they either knowingly deceived the purchaser. He found, when too late, that he had what he hadn't bargained for.

## Hardy Plants for the House.

From what experience we have had with hardy native plants, we are led to believe that they are better adapted for the window of the ordinary amateur florist than any other class of plants, and we predict that ere long they will become popular as house plants. Hitherto the tender exotics have claimed the almost exclusive attention of the amateur, simply because they were fashionable, or because the florist recommended them for house culture. But how many persons have been disappointed because they would not thrive or bloom! What anxiety they have caused on cold nights, and what grief they have excited when, on a severe winter's morning, they are found stiff with cold—frozen—dead! With the hardy plants it is different. They do not mind the extremes of heat and cold to which the living room is subject. They will grow on and bloom on, regardless of a little frost, or even a regular freeze, such as would kill the more tender plants.

The hardy exotic bulbs, such as Crocus, Hyacinth, and Jonquill, are superior blooming plants for the amateur florist, for the simple reason that they will endure more cold and ill treatment than the Geranium, Abutilon and other tender house plants. But the native bulbs and plants are even more hardy than the exotics and will bloom equally well with even less care. We have winter-growing plants and evergreens that thrive in the house in winter. Some of the handsome native ferns are evergreens; the Gaultheria and Mitchellia, with scarlet berries, the Trailing Arbutus, bearing levelly buds and blossoms, and the early-flowering Hepaticas, are all evergreens; and they all thrive in the north window of a cool room. There are also many soft-stemmed native plants that grow and bloom in winter, and are adapted for baskets, vases or pots. Many, very many flower-lovers have not the facilities for keeping tender plants over winter. To such persons the hardy native plants are particularly recommended for trial.

We do not claim that these plants should displace the favorite blooming house plants of the present period; but we believe that in them we may find a substitute for the tender plants where tender plants cannot be grown. Let us hear from some of our readers who have been cultivating native plants in the house. The subject will bear further discussion.—*Park's Floral Magazine*.

## Grow More Small Fruits.

During a recent trip through the western part of Virginia my attention was called to the small quantities of small fruits in cultivation in that section. In my opinion this neglect, for it can be called by no other name, is a sad mistake and should be remedied without delay. We speak of this lack of small fruit culture in a general way, in regard to both garden culture and more extensive plantations, but to the latter we refer more particularly. The objection that the soil is not suitable cannot be urged consistently, for if anything the soil is unusually good for this purpose.

Orchards are, it is true, a great and valuable acquisition to a farm, and a long stride has been taken toward bettering one's condition by setting out fruit trees, but incomes and good ones too can be much more quickly derived from the cultivation of small fruits.

We are not "butting" Virginia alone in these remarks, for our country in general is far behind where it should be in this respect; even in my own State, (New York) where the soil is particularly adapted for the culture of small fruits there is less done than should be, but our farmers are gradually waking up to the fact that there is money in it—forced to it perhaps by the stern facts that they cannot compete with any degree of success with the great West in raising wheat.

Come, Virginia friends, give small fruit raising a trial, and my word for it you will never have cause for regret.

New York.

GEO. R. KNAPP.

## Henderson's White Plume Celery.



This season Messrs. P. Henderson & Co. have introduced a new kind of celery, that they think will so simplify its culture that the most inexperienced can now grow celery, blanched in the proper condition for the table, just as easily as a cabbage or lettuce. The peculiarity of the celery known as "White Plume" is, that *naturally* its stalk and portions of its inner leaves and heart are white, so that, by closing the stalks, either by tying them up with matting, or by simply drawing the soil up against the plant and pressing it together with the hands, and again drawing up the soil with the hoe or plow, so as to keep the soil that has been squeezed against the celery in its place, the work of blanching is completed; while it is well known that in all other kinds of celery, in addition to this, the slow and troublesome process of high "banking" or earthing up with the spade is a necessity.

Another great merit of the "White Plume" Celery is, that it far exceeds any known vegetable as an ornament for the table, the inner leaves being disposed somewhat like an ostrich feather, so as to suggest the name given it of "White Plume."

It is well known that one-half the value of a celery, particularly in our best hotels and restaurants, is held to be its fitness as a table ornament, and for this purpose this new variety is admirably fitted. In addition to this, its eating qualities are claimed to equal the best of the older sorts, being *crisp, solid*, and having that nutty flavor peculiar to the "walnut" and some of the red sorts.

"White Plume" Celery has one drawback; the very qualities that make its culture so simple in the fall and early winter months, unfit it for a late celery that will keep until spring, as its tenderness and crispness of structure cause it to rot quicker than the old green kinds; but for use during the months of October, November, December and the early part of January, they advise it to be grown, if the saving of labor and quality be considerations. It is equally hardy against frost as the other kinds.

## Potato Experiences.

Messrs. Editors *American Farmer*:

The cultivation of the potato has been from year to year so exhaustively treated of in the columns of *THE FARMER*, that I apprehend little can now be said on the subject that is new; yet in my own experience I often find it of present benefit to review the past, and judging from the expression of public opinion as announced by the passers by when we were planting early potatoes last year, we might all reap some good from a review of last year's work on this crop.

I had a fall-plowed field which was intended for general trucking, and previous to the 17th of March it became sufficiently dry to get in order for early potatoes, so on the morning of that day I commenced to furrow out and drop the seed; the field bordered on the Frederick turnpike, which is much traveled, and many persons stopped long enough



that day to ask if we were not a little too fast with our potatoes; I thought not and told them so, but as night approached I began asking myself the same question and answering it in the affirmative; not that the 17th of March was too early to plant if the ground is in good condition, for in such case I would as soon plant on the 17th of February, but I was not doing the work right for so early in the season; I was not finishing up as I went, and therefore too fast.

I furrowed out six inches deep, dropped the seed (large potatoes cut to two eyes and dried in plaster,) about fifteen inches between sets in the bottom of the furrow, and covered about two inches deep; my intention was to spread wood ashes, of which I had a good supply, upon this two-inch covering of soil, and then fill up to the level making a covering of six inches; but as night came on I found a condition of things not at all to my liking—a large patch of potatoes planted with only a two-inch protection of soil, the ground freezing, and every indication of an approaching snow storm. Morning discovered an unbroken sheet of white, overlying ground hard enough to bear a wagon.

It was three weeks before I could again get into that field to work, and then I finished the covering as at first intended, and continued planting.

As time rolled round I commenced digging about in search of new potatoes, and found them in that 17th of March planting for three weeks before I could get any right along side, the soil, seed and cultivation being the same.

The lesson learned from this experience is to plant for early potatoes as soon in spring as it is possible to get the soil in good order for the work, but avoid my error of part covering. I did not have a full stand of hills in this patch, but what did come made a good crop and were early; yet I might have lost the entire planting by such light covering so early in the season, and hereafter when I intend putting wood ashes or other fertilizer between soils, I will finish the work as I go.

I would advise this plan of putting wood ashes or some good fertilizer upon a two-inch covering of soil, to be in turn covered the depth of the furrow, which for right early planting should not be less than six inches.

Some farmers tell me it is of no use planting so early, that the seed just lies in the ground with a tendency to rot, and if they do not rot will not come up any sooner than those planted later when the soil has become warm and good growing weather set in, and these farmers are in a measure right. I find no rot to occur in light well-drained soils let the planting be done ever so early, and in our light mountain soil would plant in the fall without fear of rot. As to not coming up any sooner, well sometimes they do and sometimes they don't—last spring they didn't; my second planting was just breaking ground when I could not say my first was more than up; indeed a farmer said to me, "my potatoes are up as soon as yours and you planted a month before I did," yet this farmer did not have potatoes from his plants as early as I from mine, nor was my second planting nearly so early as the first, although there was hardly a difference in the time of coming up; but I noticed a vast difference in the manner of coming up, and throughout all subsequent stages of growth. The first planting broke cover as if they meant business, were really twice as sturdy as the other, and maintained this vigorous growth until I dug them, three weeks before the second planting showed tubers of like size. I think the early planted potato will sprout, and, if too cold to protrude its tender head above ground, goes to work in the other directions, makes root, and when it does come up its abundance of working roots

enables it to take and hold the lead of all subsequent plantings.

I had great and unexpected success with one of my late, and indeed an after-thought, planting; when I had done planting for the season, the last late planting having been put in a certain field, an old resident informed me that he had seen potatoes both early and late planted in that field for a score of years, and he had never seen a good crop taken from it notwithstanding the lavish use of manure and labor. I found the soil to be light sandy loam, and the exposure the best for drying out soon in case of short rainfall, and as I had planted but four inches deep in this field, I determined to make another planting and a deep one. So putting two horses to a new "Malts" single shovel plow, the furrows were drawn, going two and even three times when necessary in each furrow, until they were of a uniform depth of eight inches; the seed were dropped, pressed into the soil at the bottom of the furrow and covered three inches; every set came up, and as soon as the plants showed well along the rows the harrow was put to work, and once cultivating and once through with double shovels leveled the ground, and the crop was laid by.

At taking up time the old resident called round and was forced to declare that he had at last seen a good crop of potatoes grown in that field and wanted to know how it was done. I told him that no rough manure, deep planting and level culture were the requisites for successfully growing potatoes in that field.

I remember reading in a paper from one of your correspondents of an intention to plant a long line or hedge of blackberry; if he carried out this intention, I for one would be glad to hear something more on the subject, for I am thinking of planting such a line around a ten-acre lot. Will "Peck's Bad Boy" content himself sitting on an outside cane eating blackberries, or must he break through to get at the strawberries on the inside?

CHAS. E. SANFORD.

Cosy Dell Gardens, Emmitsburg, Md.

#### Sowing Peas.

Joseph Harris, in his seed catalogue, says: Sow Extra Early Kent Peas as early as the frost is out of the surface soil. Dry, sandy soil is best. Sow in rows not less than three feet apart. Make a drill mark an inch deep, with a hoe or rake, three inches wide. Sow the seed in this row about half an inch apart. This will give about ten peas to each inch of row. This is thick planting—thicker than is necessary perhaps, but if the land is rich, thick seeding will favor early maturity, and you will get peas several days earlier than if sown thin.

Frost rarely hurts peas, but if a little horse litter is scattered on top of the row it will do no harm, and may sometimes be of much use. For a second early crop the sowing may be delayed till the ground is in good working condition.

Kentish Invicta is an excellent second early pea. Sow as recommended for Extra Early Kent, except that it is not necessary to sow so thick, say six peas to each inch of row.

For the main crop, I know of nothing better than the Champion of England. For market purposes instead of Champion of England the White Marrowfat, or the Black Eyed Marrowfat when grown on rich land and the pods picked before they get too ripe, will prove eminently satisfactory both in yield and quality.

It is desirable to sow the Champion of England or the Marrowfats as early as the ground can be got into good condition. Sow five or six peas to each inch of row, and cover two to three inches deep.

The dwarf varieties, such as McLeans's Little Gem, Premium Gem and the Ameri-

can Wonder, are great favorites with amateur gardeners. They do not need poling, and on rich land, with clean cultivation, produce a large crop of the choicest and best peas. The yield per acre is much greater on rich land than from the taller growing sorts, but I think the yield from a quart of seed is not so great.

#### Boxes for Starting Seed.

These will soon be in demand. An author says that "the most convenient boxes in which to start seeds and cuttings are those known as 'flats' among gardeners. A good size, for the kitchen garden in which to start tomato seed, etc., is 2 feet long 16 inches wide and 3 inches deep. These shallow boxes are easy to handle, take up little room and allow of much better drainage to the young plants. Salt or soap boxes can be easily cut up into 3 or 4 boxes 3 inches deep. Neat leather handles on each end of the box, will increase its handiness. The bottom is better if made of board, as the cracks insure good drainage. D.

#### Effects of Pollen upon Pistillate Varieties of Strawberries.

It is scarce fifty years back since the discovery was made by a fruit grower, near Cincinnati, that the blossoms of pistillate varieties of strawberries must be fertilized by the pollen from perfect or hermaphrodite varieties to render them fruitful. The fact had long puzzled different horticulturists since the cultivation of strawberries began. It also led to the discovery that pistillate varieties, when properly fertilized, were the most productive of the two; as witness, the old Hovey's seedling, Champion, Col. Cheney; and later, the Crescent and Manchester.

It has remained for our time, however, to discover the fact, nearly or quite as important, that the characteristics of the variety used to fertilize, are transmitted in a great measure to the fruit borne upon the sort fertilized. My attention was first attracted to this fact in 1880, although it was noticed several years previous by others engaged in the cultivation of strawberries. The effect was so marked, that in a communication about that time, I advised fertilizing the Crescent with Sharpless Seedling, planted say every fifth row. Experience has since demonstrated that this is hardly sufficient. I would advise planting every third row with some good strong staminate variety. The good effects will be readily noticed, in the increased number and size of the berries. If large size is wanted, use Sharpless. Rows of Crescents adjoining the variety invariably increase the size of the berries; a large majority of them being double and inclined to coxcomb in shape, quite unlike the usual form of this variety. If firmness is desired the Wilson is, in my judgment, the best. If beauty of form and bright color, Kentucky Late seems to fill the bill. Chas. Downing gives deep color and fair size. My experience and observation has not extended beyond the Crescent, but the effects were so plainly visible as to attract my notice at once.

Some growers go still further, and advise planting every fourth or fifth plant with the variety with which you wish to fertilize. The field open to experiments is a wide one, and the proper impregnating of the many excellent pistillate varieties now in cultivation should be a subject of interest to all fruit-growers. It is well to select for fertilizing, varieties which bloom simultaneously with the sort to be impregnated, bearing in mind also that a large amount of healthy pollen is necessary to properly fertilize so heavy a bloom as is usually found upon pistillate sorts. Insufficient fertilization will be noticed by many berries being small, knotty, and imperfect. The sort used to fertilize has

double duty to perform—that of furnishing pollen for its own bloom, as well as for its neighbor. As a proof of this I have noticed that stray clusters of Crescents found among other varieties were better developed, and more productive than when surrounded by its own species and near staminate kinds. The fertilizing of the imperfect flowered kinds of strawberries is looked upon by the majority of small fruit-growers, as a needless and troublesome job, but I am sure it will amply repay any one who will take the trouble to do it. R. S. C.

Harman's, Md.

#### Preserving Cut Flowers.

Different flowers require a different mode of keeping; for instance, rose buds from the carnation. I have found by experience that all flowers, after they are cut, in order to retain freshness, should be kept in a cool place, and away from the air as much as possible.

I have seen handsome cut flowers arranged in a vase or basket set in the front window, with the window raised and a full current of air blowing in upon them, which would soon cause them to droop and hang their heads. By all means do not raise the window on cut flowers, the air will cause them to wither sooner than the heat.

Should you have a bouquet or basket, see that the flowers are kept well sprinkled with cold water through the day, and at night before you retire have your basket or bouquet put in some air-tight vessel, and placed in the coolest part of the house; be careful and do not put it where it will freeze. Keep it in temperature of from 40 to 50 degrees; cover the flowers with well moistened paper or a very thin cloth, and you will find that the flowers, which were wilted and hanging their heads the night before, will have freshened up and look nearly, if not quite as well, as they did when received from the florist.—*Cor. Gardener's Monthly.*

#### Thriving Quince Trees.

A correspondent of the *N. Y. World* writes: "I have not seen any communication this season relating to quince culture, so a word or two in this direction from me may not come amiss. Wonder is often expressed that the quince, which is hardy and well adapted to many soils and climates, should be a comparatively scarce fruit. Fine quinces command a fair price, and yet the market is rarely glutted with them. I think the reason is that not one grower in ten gives his quince trees a fair chance. The trees are grown in neglected portions of the garden or orchard, and little or no culture given; the result is small and knotty fruit, not worth harvesting, and certainly of no account for market. My experience, and I have some very thrifty, profitable trees, is that the quince must not stand in undrained land or in the grass if one wants fine fruit. The quince requires a deep and rather moist soil, but it should be well drained. The soil ought also to be rich. Quince trees in sod land soon run down and become unprofitable; it pays to cultivate the ground enough to keep the soil free from weeds, and a dressing of well rotted manure occasionally will help matters. I also believe in pruning quince trees every year before the buds swell in the spring."

#### A New Method of Watermelon Culture.

A correspondent of the *Rural New-Yorker* describes the following method by which an extraordinary crop of Watermelons was raised: Holes were dug ten feet apart each way, eighteen inches square and fifteen inches deep. These holes were filled with well-rotted manure, which was thoroughly incorporated with the soil. A low, flat hill was then made and seed planted. When the vines were large enough to begin to run, the whole surface was covered to the depth of a foot or fifteen inches with wheat-straw. The straw was placed close up around the vines. No cultivation whatever was given afterward; no weeds or grass grew. The vines spread over the straw, and the melons matured clean and nice. The yield was abundant, and the experiment an entire success. This is surely worth trying next year.



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Maryland Dairymen's Association.  
Maryland State Grange, P. of H.  
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BALTIMORE, FEBRUARY 15, 1884.

## Additions to Clubs.

Club lists may be added to at any time,  
and at the club rates. It is not necessary  
that all the papers should go to the same  
post-office or begin with the same number.  
We renew our expressions of thanks to our  
friends who have sent in clubs. In many of  
these an unusual proportion of new names  
appears. This is very gratifying to us, and  
our readers will, we trust, be the gainers also  
by the widened circulation of the FARMER  
amongst new people. We hope all such, as  
well as old correspondents, who have inter-  
esting and useful experiences will contribute  
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Convened under the auspices of the Agri-  
cultural Societies of Baltimore and Harford  
Counties, will meet in the hall of the Young  
Men's Christian Association, corner Charles  
and Saratoga Sts., Baltimore, at 10.30 A. M.,  
Friday, February 23d.

The following gentlemen have agreed to  
be present and make addresses: Col. Robert  
Beverly, of Virginia, on Feeding Cattle;  
Peter Henderson, Esq., of New Jersey, on  
Market Gardening; Dr. M. G. Ellkey, late  
Professor in the Virginia Agricultural Col-  
lege, on Manures, and How To Use Them.  
Dr. E. Lewis Sturtevant, Director of the  
New York State Agricultural Experiment  
Station, was also invited, and it was hoped  
would be able to attend and speak on the  
Uses and Benefits of Experiment Stations,  
but as we go to press we learn he cannot  
attend.

The following subjects will be presented  
for discussion: 1. Profitable Methods of  
Feeding Cattle. 2. Best Plans of Managing  
Manure. 3. Most Economical and Quickest  
Way to Improve Land. 4. Is Dairying in  
Counties which find a Market in Baltimore  
a Profitable Branch of Farming, losses in-  
curred and deterioration of land being con-  
sidered? All persons interested in Agricul-  
ture in the counties named are invited to  
participate in the proceedings, and anyone  
having information on any topic likely to be  
of profit or interest is urged to present it to  
the Convention.

The following gentlemen have been desig-  
nated as officers of the convention: Presi-  
dent, Wm. Webster, Esq., of Harford; Vice-  
Presidents, Thos. S. Iglehart, Esq., of Anne  
Arundel; Wm. Baldwin, Esq., of Harford;  
Henry O. Devries, Esq., of Howard; G. S.  
Haines, Esq., of Carroll; Saml. M. Price, Esq.,  
of Baltimore. Secretary, Wm. B. Sands, of  
Baltimore.

There ought to be a large gathering of the  
farmers of the portion of the State meant to be  
included in the convention. The reputation  
and experience of the gentlemen who are to  
deliver addresses will make the proceedings  
interesting and profitable, and the subjects  
laid down for discussion are such as will  
evoke much useful information.

## The Value of an Experiment Station.

The value of a well organized Experiment  
Station, under competent scientific men, is  
well exemplified by the very important work  
done for the State of North Carolina by  
her station, in making known the value and  
extent of the phosphates found there, as well  
as investigating the best methods of utilizing  
both the phosphates and the accompanying  
marls for agricultural purposes, and for the  
manufacture of commercial manures from  
these materials. On another page is given  
a communication upon this subject. This is  
one of the ways in which an Experiment  
Station may prove to be of direct pecuniary  
value to the farmers.

That both marls and phosphates of im-  
mense value exist in Tide-Water Maryland,  
is in the highest degree probable, nor could  
they long exist unknown if we had here a  
station under competent scientific direction.

There are questions of the highest econ-  
omic importance concerning the manufacture  
and use of commercial manures which can-  
not be settled by private enterprise, but  
which could soon be authoritatively settled  
by the Experiment Station. There are ques-  
tions of feeding, and the most profitable  
methods of producing and marketing animal  
products concerning which the whole farm-  
ing world is at sea. There are physiological  
questions concerning the principles of breed-  
ing and the adaptation of particular breeds  
of live stock to localities and particular pur-  
poses, the solution of which is of the highest  
interest and of great economic value to the  
entire community; all of which would be  
the appropriate work of the Station.

Yet we are asked "what good do these  
Stations do?" "Why is not the Agricultural  
College competent to do all, and why does  
it not do all that you propose to do at the  
Station?" The reason is brief and simple,  
viz., there is not and for a long period has  
not been at the College any person in the  
smallest degree capable of undertaking any  
scientific investigation, and there never will  
be any such person there under the present  
absurdly foolish organization and manage-  
ment of that anomalous institution.

The appropriate work of such a College,  
is to teach young men the principles and  
practice of scientific agriculture. The ap-  
propriate work of an Experiment Station is  
the investigation and solution of problems  
of general economic interest and the dif-  
fusion of a correct knowledge of the agri-  
cultural resources of the state among the  
people of the state and outside of the state,  
with a view to the encouragement of the  
influx of population and capital for the  
development of the rural districts.

It would be a disastrous error to encum-  
ber even a good college with the work of  
an Experiment Station; and much worse to  
hitch on a college, such only in name and  
practically worthless, to an Experiment  
Station. None but persons having the  
crudest ideas on the subject would ever  
think of combining a college and Experi-  
ment Station under one management.

Maryland ought not to lag behind other  
states in the matter of agricultural progress  
or in her appreciation of the value of science  
in all the industrial arts and pursuits, es-  
pecially in agriculture, the nursing mother  
of all arts and pursuits, and of all sorts and  
conditions of men.

## The Agricultural College.

This institution, which deserves attention  
only that it virtually belongs to and has  
long been supported by the State, and that  
its title seems to connect it with the farming  
interests, comes again to the front to obstruct  
and defeat measures proposed for the ad-  
vancement and protection of those interests,  
notwithstanding it has itself sunk to a lower  
level of inefficiency than it has ever before  
reached.

Having forfeited every claim to the confi-  
dence of the farmers, failing utterly to per-  
form any of the duties and work required by  
its charter, rebuked by Legislature after  
Legislature, a large proportion of its sup-  
port withdrawn, (the last allotment being  
given it only to allow it to pay its debts and  
wind up) it comes forward now with an im-  
pudent appeal, not that its lost appro-  
priation shall be restored, but that it shall be  
largely increased—more than doubled.

Captain Augustine J. Smith, the president  
of this mock-agricultural institution, has given  
to the public a letter, which does not con-  
spicuously illustrate his fitness for the place  
he holds, if indeed a knowledge of the sub-  
ject with which he deals, grammatical lan-  
guage and clearness of style are demanded  
in that position.

We submit to our readers some extracts:  
Premising that agriculture has developed  
into "a learned science," and that much  
money is spent in other States and countries  
to promote agricultural education and inven-  
tigation, he says:

"The Maryland Agricultural College,  
some assert, has not thus far realized to  
the agriculturist the full measure of  
usefulness for which it was created. And  
yet it is claimed by its friends that it has ac-  
complished all that its resources could  
achieve."

Its resources, independent of its receipts  
from pupils, have long been over \$18,000 a  
year from the State. It has received in all  
from the State about \$300,000, and it has  
accomplished—absolutely nothing!

"The College possesses a fair equipment for  
its work, in the way of an anatomical collec-  
tion, and maps, charts, seeds, etc., etc., etc.,

for teaching agriculture and its kindred  
branches. It has also a chemical laboratory,  
sufficient for the ordinary demands of in-  
struction. \* \* \* What is needed  
to meet the progressive and advanced de-  
mand of agriculture, is to broaden the field  
of education. Make the College conduct  
the analyses of all fertilizers and soils, min-  
erals, &c., &c. Require it also to conduct  
and direct the Experimental Work of all  
kinds."

It is evident Captain Smith has not read  
the charter of the College. We quote its  
provisions, which show that his proposition  
is rather belated, this work having been  
neglected for nearly twenty years.

"It shall be the duty of the said Board of  
Trustees, to order and direct to be made and  
instituted on said Model Farm, annually, a  
series of experiments upon the cultivation  
of cereal and other plants adapted to the lat-  
itude and climate of the State of Maryland,  
and cause to be carefully noticed upon the  
records of said institution, the character of  
said experiments, the kind of soil upon  
which they were undertaken, the system of  
cultivation adapted, the state of the atmos-  
phere, and all other particulars which may  
be necessary to a fair and complete under-  
standing of the result of said experiments;  
\* \* \* the said Board of Trustees shall, at  
every session of the Legislature, present in  
printed pamphlet form a full and correct re-  
port of the condition of the said Agricul-  
tural College and Model Farm, and the condi-  
tion or final results of all experiments  
undertaken as provided for in the foregoing  
section."

Who ever saw reports of such experi-  
ments? Who ever saw the record here re-  
quired to be kept? Notwithstanding this  
provision of the organic law of the in-  
stitution, it is gravely proposed, as if it were  
not a burlesque, that the College now be  
"required" to conduct and direct the Ex-  
perimental Work of all kinds.

On the same principle, a farm hand in-  
capable of performing the labor committed  
to him when he is paid \$20 a month, should  
be paid \$30 and be "required" to do it!

But here is the "foundation and crowning  
glory" of Captain Smith's plan:

"Now all this needs adequate financial  
means, but not an amount which should  
cause hesitation. Funds would be necessary  
for adding to the Laboratory for analyses of  
fertilizers and soils, and for the equipment  
for experimental work. This might be in  
the form of an annual allowance. I propose  
in addition to this, and as the foundation  
and crowning feature of the plan, that the  
State shall create two scholarships for each  
Senatorial district, the amount to be allowed  
the college for each pupil to be \$200.00, and  
the appointment to be made by the Senator,  
or the Senator and Representatives from  
each district. Let it be understood that no  
one need apply for these scholarships who  
did not intend to take the full course in agri-  
culture. This would secure, beyond doubt,  
an educated agriculture for the State, and  
provide the means and facilities by which  
the sons of farmers and others, who desire  
to pursue agriculture as an occupation,  
could acquire thorough and enlightened  
knowledge concerning the science through  
which they were to earn their livelihood."

A little figuring will show the modesty of  
this suggestion. There are 26 senatorial dis-  
tricts; two scholarships to each will make 52,  
which at the "amount to be allowed the col-  
lege for each pupil," namely \$200, makes  
\$10,400. Add to this the fund for equipping  
the laboratory, etc., "which might be in the  
form of an annual allowance," say \$5,000,  
and the yearly sum is \$15,400—certainly  
"not an amount which should cause hesita-  
tion."

Oh! no, this will not work. The "Senator  
and Representatives from each district" can-  
not be beguiled into any such waste of the  
public money, and the farmers of Maryland  
are not paupers that any such demoralizing  
scheme would find favor with them.

It seems never to occur to the gentlemen  
who run this so-called agricultural school,  
that if the farmers of this State had any  
reason to believe that a young man could  
get a real agricultural training there, there  
would be no need of the stimulus of free  
scholarships to induce them to crowd its halls  
with students, and pay for their instruction



too. The Agricultural College of Mississippi never had any State aid, but its "living present" consists of active, live, earnest men, who are fully educated in the branches they teach, and 250 students engaged in studying agriculture and nothing else. When the Agricultural College of Maryland merits the confidence and support of the farmers, she will get them and not before.

Captain Smith in pointing out the needs of the College for money, keeps out of sight entirely the \$7,800 the State still pays the College every year, although even with this substantial aid—it is an ample endowment of itself—it is again in debt.

Let us now look at the facts, the grim, hard facts concerning the college.

It was in a bad enough way when Captain Parker, satisfied, as he said, he could not secure the confidence of the farmers of the state, resigned the presidency. Captain Smith succeeded to it, though entirely lacking in the experience, qualities, and training which fitted him for it. By energetic pushing and much promise of reforms to be made, he collected some 34 or 35 pupils. By the end of the very first term, (January 31,) they already had diminished to 20.

Twenty boys paying \$300 each a year, and the State of Maryland contributing out of the fund appropriated by the United States for the promotion of industrial education \$7,800 a year more, to educate them, and how? In a broad and liberal course, which would fit them especially for the vocation of a farmer; prepare them, as Mr. McHenry says, for the practice of agriculture, as a school of medicine prepares its students for the practice of medicine? No, but in the identical branches taught in every academy and public school in the state!

The War department, becoming aware from his reports of the meagre attendance of pupils, withdrew the Army Officer detailed to give instructions in military tactics, and has again and again refused to restore him.

In this "Agricultural" College there is no Professor of Agriculture. A boy may learn French and German, and we suppose Latin and Greek, and the differential calculus, but there is no chair of either scientific or practical agriculture.

The president, neither teacher, chemist, nor farmer, but as described by himself, "an expert in sugar-producing plants," has charge of the farm, and is the administrative officer, (he does not teach), and the effects of his administration is seen in its having "built-up" the attendance in about five months from 35 to 20 pupils. How many of these are Marylanders we have no means of knowing.

The private stockholders, the very founders and most liberal contributors to the college, are moving to have its charter vacated and the property sold, satisfied that it has sunk so low it cannot even be reorganized to effect any good end.

Farmers' clubs, granges and other associations throughout the State have again and again protested emphatically against the appropriation of further money to this spurious agricultural institution, and asked that the United States land scrip income be withdrawn and the institution closed up. There is no record that for the past ten years, any single farmers' organization within the State has ever said a favorable word for this institution, or asked that the Legislature should continue to foster it—so known of all men is its inefficiency and departure from the objects of its creation.

Yet, in the face of all this, the preposterous demand is made that the Legislature of the State shall ignore the facts, revoke the judgment of former sessions, disregard the demands of the farmers of the State, and, in place of the \$6,000 on which it has ignominiously failed in the past, give the college some \$15,000 on which to fail again in the future!

### The Stockholders and Founders of the Agricultural College.

Mr. McHenry thinks it should be wound up.

Wm. B. Sands, Esq., Baltimore.

DEAR SIR: In reply to your letter of 5th inst., I can only say that I have heard very little during the past year about the condition of the Maryland Agricultural College, but I still hold to the opinion expressed by me at the stockholders' meeting of April last, that it is not doing the work which its founders expected it to do. That work should be the preparation of its students for the practice of agriculture, just as the work of a school of medicine is to prepare its students for the practice of medicine, or that of a school of law to prepare its students for the practice of law.

Whatever causes may be assigned in explanation of the failure of the College to carry out the purposes for which it was founded, there can be but few, if any, persons who do not admit that it has so signally failed, and as I have no longer any hope that under its present charter and organization better results can be attained, I think that the stockholders and the State as joint owners are equally interested in the proposition brought forward by me at the last annual meeting of the former body, that the charter should be vacated and that a commission be appointed to wind up the affairs of the College, to sell the property and to divide the proceeds of sale pro rata amongst the owners.

I doubt whether a large number of stockholders could be brought together to attend a special meeting in Baltimore. But a petition to the Legislature might be prepared and sent to each known stockholder with a request that his approval or disapproval of the same, in writing, accompanied by a statement of the number of shares represented by his vote, should be sent to such person as may be designated to take charge of the matter. Yours respectfully,

J. HOWARD McHENRY,

February 7, 1884. Per J. E. HOWARD.

[It being suggested to Mr. McHenry, that many changes have occurred in the ownership of the stock—much of it being in the hands of administrators, trustees or assigns—that it would be difficult to communicate with them, he says, in a later note, that it would be sufficient to obtain the signatures of those of the stockholders whose names are known to a petition to the Legislature to take action.]

Mr. Davis is unable to suggest any plan which will improve it.

Wm. B. Sands, Esq., American Farmer.

DEAR SIR: I am in receipt of your favor of the 9th inst., enclosing the copy of a letter from J. Howard McHenry, Esq., intimating his adherence to his former expressed opinion of the failure of the Maryland Agricultural College, and his proposal by petition to the Legislature to wind up the same and dispose of the property for the payment of debts, and the balance, if any, to be ratably distributed between its shareholders.

Considering my former relation to the College, I do not care to appear in antagonism to it. Yet I have ceased to look upon it as a success, or under its present organization as likely to be a success. Nor am I prepared to suggest any modification of its charter as likely to improve its condition.

The truth is, I think the mistake was in an attempt to unite two incompatible ideas in one, and that is a College and Agriculture. A college, as we understand it in this country, is a place for study and high learning; agriculture is a field for labor, observation and experiment. To combine high study and labor was what our Agricultural College attempted, but unsuccessfully; and I am not aware that a similar attempt has been successful elsewhere. I am aware that we have

reports of success in other States, but I am strongly inclined to believe that the success would be found, upon inquiry, to be in one or the other branch of study or employment, and not in the broad range upon which our Agricultural College strander.

We put agriculture foremost and make it secondary—hardly that—and hence the disappointment and dissatisfaction. I am unable to see that any thing short of a radical change in name or object can revise the institution, and I am not sanguine of success.

Something like the proposed Experiment Station, with shops to teach mechanical arts, of course, including explanatory and necessary studies—might revive and restore public confidence in the College.

I have said that agriculture depended upon labor, experiment and observation. This, as I understand it, is the object and foundation of the proposed Agricultural Station, which if well conducted, cannot fail to be beneficial and advantageous to the farmer. It will test and publish for the benefit of all, views, theories and discoveries, to which the public would have no claim if made by a single individual, if indeed, in the present state of agriculture, a single individual in the State could be found who had either the means or the time to make experiments for the general good, much less his own. Therefore, if made at all they must be by the State. The science of medicine, founded like agriculture upon experience and observation, has for the general benefit been aided by the State. Why not extend similar aid to the science of agriculture, upon which all depend, as to medicine, upon which only a fraction, though an important fraction, also depends?

I have written this hastily and off-hand, with several interruptions, and send it without revision in reply to your favor received this morning.

Yours very truly, A. B. DAVIS.  
Greenwood, Md., February 12, 1884.

CAPTAIN SMITH wishes to be understood, when the Legislature provides for the 52 free scholarships in his college "that no one need apply for these who did not intend to take the full course in agriculture."

Perhaps in his next lucubration he will explain how students are, in an agricultural school, to avoid taking an agricultural course. Are there to be any more side courses, "seamanship" and "navigation" perhaps, and the "management of vessels," as once before, when the Legislature so liberally endows it anew?

SAMPLE OF WATER AND MINERAL.—We could not find even traces of sulphur in the sample of well-water from subscriber in Baltimore county. The water is evidently very pure in every respect, and does not contain anything objectionable for use for domestic purposes. The blackening of the stock of the pump, painted with red lead and the destruction of tin vessels, must have some other cause.

The specimen of rock from same party is "Mica schist," and of no value whatsoever.  
LEHMANN & MAGER.

### The Farmers on the Agricultural College.

The Gunpowder Farmers' Club, at its last meeting, readopted the following resolution, it being the same that was passed by it two years ago. This club includes stockholders of the college, former pupils, and the fathers of later ones:

"It having come to the knowledge of this Club, that efforts are being made by the officials of the Agricultural College to have restored to that institution, the state appropriation heretofore withdrawn at the instance of this and other farmers' organization, Resolved, That the Gunpowder Agricultural College requests the delegation from this county in the Legislature, to oppose and vote against any such expenditures of the tax payer's money to an institution, which has long proved its inefficiency to advance in any direction the agricultural interests of the State."

### AGRICULTURE IN THE SOUTH.

#### A Letter From Florida.

BY TH. POLLARD,

(Ex-Commissioner of Agriculture of Virginia.)

It occurs to me that my articles may be profitably and agreeably varied by giving some account of Florida, with its productions and its advantages and disadvantages. If none of our numerous readers have contracted the "Florida fever," some of them, perhaps many of them, will soon do so. Northern people are annually coming in large numbers to this State, for health and profit, and the number is constantly increasing. So great is the demand for accommodations, that new hotels are constantly being erected, and many are now established, equaling in comfort, if not in elegance, the best Northern hotels. Many do not know that Florida is the largest of the states east of the Mississippi River. Its area is 60,000 square miles, that of my own state, Virginia, containing only 43 to 45,000 square miles.

Florida is comparatively a new state, being ceded to the United States by Spain in 1821, and not erected into a state until 1845. Long harassed by Indian wars, without means of access to the interior of the state, it was just entering on some prosperity when the late civil war decimated and impoverished her people. Out of a population of 371,864, there were in 1880, 127,846 slaves which were of course liberated by the results of the war. It is only since the war that Florida has become a *Terra cognita*. And if the Yankees, with their acknowledged shrewdness and foresight had not penetrated the country, it would now be almost a *Terra incognita*, not known by the outside world, and the inhabitants themselves almost not knowing there was an outside world. Even now in many parts of the state the people are living in a very primitive condition, in the rudest houses and with scarcely any comforts. In much of the interior there is scarcely any stock, and here, milk and butter are almost unknown, and sugar is almost unused. The inhabitants are now waking up to their advantages, and are planting out orange groves, strawberries and melons, and in Southern Florida, pineapples, lemons, guavas, bananas and cassava, as well as the fruits first mentioned. Bananas do tolerably well in the county from which I am writing, but it is rather far North for the articles last mentioned. There is scarcely any county in the state in which oranges succeed better than in Volusia. The first Northern settlers mostly located in Orange County, in about the same latitude as Volusia, and no doubt they came down in fear and trembling of being "scalped," an unpleasant custom introduced by the Indians, but which it was feared the native whites still followed. Seriously however, the Northerners did come South after the war with many misgivings of personal safety, induced by the ridiculous and false tales of Southern outrages and personal hate of Northern men. Now, Orange County is one of the most prosperous in Florida, dotted over with orange groves, mostly owned by Northern men. So far from any unkindness exhibited towards them from the people here, they are gladly and kindly received, and the Floridians are blessing the day when their Northern fellow citizens commenced their settlements in their state. Mostly by Northern energy, important railroads have been built, with some more under construction, and many more chartered. Two lines cross the entire state, one from Jacksonville to Tallahassee, Chattahoochee, and Apalachicola Bay, the other from Palatka on the St. John's to Cedar Keys. With the railroads and extensive water communications, having a larger sea-coast than any other of the United States, Florida has for many parts



of the state, good transportation, and railroads are daily being pushed into the interior.

Of course, my opportunity for personal inspection of the state has been limited, but I have obtained information from persons well informed, and have consulted the best written publications, as the Report of the Bureau of Immigration of the State, and two publications issued by the United States Agricultural Department, the more recent one, by that intelligent gentleman, Mr. Wm. Saunders, Superintendent of its grounds and gardens. He gave the state a personal inspection in 1888, under direction of Mr. Loring, Commissioner of Agriculture. From what I have seen, and heard, and read of Florida, I have come to the following conclusions: 1st. That there is more room for money-making, by the cultivation of the soil than in any other State in the Union. 2d. That the climate is unsurpassed in this country, and probably in Europe. 3d. That it is healthy as any other of the United States, and excluding the country on the rivers, it is the healthiest. I do not include in this opinion the country around Okeechobee Lake, and South of this, constituting the "Everglades." It is thinly settled, and has not been tested as regards health. All along the Atlantic coast of Florida, it is said to be healthy.

As regards the first conclusion, an orange grove in bearing, is universally admitted to be very profitable. It is true it takes time for the orange to come into bearing, but when a grove is established it is there for a century in productive condition,\* if well attended to, and the annual expense is small. In the mean time, if land is scarce, bananas, and probably pineapples may be cultivated between the orange in South Florida, though the pea is usually cultivated between the trees in the pine region, as a fertilizer, furnishing ammonia for the trees. The first cost of an acre set in oranges is variously estimated; of course the clearing of hammock lands is much more expensive than that of pine lands, and the cost of the trees varies from 30 cents to \$1.00, according to age and size. The following is an itemized account of what it costs the writer, per acre, to clear, fence and plant (in 1888), on pine land:

Clearing 1 acre, grubbing and ploughing...	\$25.00
Fencing (1,000 rails, staked and ridered with mostly heart pine).....	14.00
Planting out trees.....	2.50
70 trees at 75 cents a piece.....	52.50
	\$94.00

Of course, where more than one acre is fenced, the cost is proportionally decreased. Two acres it is said, for instance, will take only 1500 rails.

Trees, on an average, probably do not cost more than 50 cents—the trees as above were six years old, four years old before budded, and two years budded. The cost of land which varies greatly, (hammock land costing \$50, and more, and where pineapples are to be raised, often as much as \$200) has to be added to cost in establishing a grove. The writer's land, being "State land," cost only \$1 per acre. The Agent of the Bureau of Immigration of Florida, estimates the first cost of establishing an acre of oranges is only \$70, evidently too low. The after cost of cultivation is not large. Three plowings and three hoeings are necessary, which is quickly done on this light land. The cost of fertilizing varies very much, according to the views of orange growers. The writer does not believe that commercial fertilizers are necessary on these lands, freshly cleared, that being supplied by decaying vegetable matter, and by peas which are almost universally used on orange groves; the custom here being to drill them. They grow rapidly and freely, and mature fine crops of peas, which if gathered, will

\* After 80 years old, it is said not to bear so freely as when younger.

generally pay cost of cultivation. Some of the vines used for mulching the trees, and the balance turned under in September, though I should be inclined to leave them decay on the land. The "ash element" would seem to be the fertilizer indicated for oranges—this consists of *fine ground* South Carolina phosphate, two-thirds, and kaint, one-third, and may be purchased in Charleston and Richmond at about \$18 per ton, freight added, 400 lbs. per acre, 3 lbs. spread around each tree not too near, and the balance broadcasted for the peas. We know this is a great promoter of the pea growth, and we believe this will be sufficient on these light lands for two years. There is some additional cost for mulching the trees, and watering them the first year in very dry weather, until they get established.

Orange trees begin to bear in five years from setting out, and if properly attended to in 10 years will bear 1,000 oranges to the tree, and in fifteen years, 3,000. Away from the landings, they sell on the trees at 1 cent a piece, the purchaser bearing all expenses. The writer lately saw a tree at Volusia, which the owner told him, this year, bore 3,000 oranges, which he sold, delivered at the wharf, at 8 cents a piece. Orange trees in Florida have been known to bear 10,000 oranges, and in Mexico it is said they have borne to the tree, 30,000.

In our next we will furnish another letter from some point further in Florida, probably Orlando.

Volusia Co., Florida.

## Home Department.

### From "Kitchen Philosophy."

#### Independence.

Those who have served a full apprenticeship in the kitchen will probably give little heed to our philosophizing; experience and habit satisfying their ideas of the "best way," and other ways striking them as "new fangled," and therefore not practical. This is not strange since there is an element in human nature, hardly to be accounted for, which makes the longer road seem the shorter and the harder task the easier, because of its familiarity.

It is therefore chiefly such as feel their need of being taught, whom I will endeavor to help to a better appreciation of kitchen science than prevails generally, and perhaps to develop a taste for it.

It is as great a mistake to suppose that the kitchen may be run without intelligence, as that the farm can, and therefore while the theories of farming are being worked out, and up to the standard of common business principles, it is no less important that we should take the kitchen interests out of the hands of the utterly ignorant and obtuse, who have so long "ruled the roast," and bring thought and reason to bear upon them.

As a rule we have an exaggerated idea of the hardships and disagreeableness which necessarily belong to kitchen service, because we judge from the ignorant practices of those we employ, and from our own attempts to do as they do, when the necessity for doing their work is thrust upon us. Very few of us have a just conception of the possibilities there are for doing such work without hardship or unpleasantness.

While scrubbing and scouring stand out as the most prominent feature of kitchen work, and cooking means standing over the hot stove and handling pots and kettles chiefly, every woman of refinement will naturally shrink from undertaking it, while there is a possibility of avoiding it. Yet I have known women to whom the refinements of life belonged, choose these things; one I have in mind who had a handsome new house built, with every modern appliance, but, by some oversight, the pantry shelves were painted; her first act upon

entering in possession thereof was to scour the paint off, which, with her, meant the scouring to be repeated every cleaning day; verily her soul delighted itself in labor.

It is a common belief here that northern ladies who work at all, work much harder than they do in this latitude, but this is a mistake. It is true that ladies there will accept the necessity for helping themselves more readily than they will here, which is partly because they are more given to counting the cost, but chiefly because they know better how to save labor in so doing. It is with them a part of their accomplishments to know the value and use of labor-saving appliances, nor will the class of servants they employ do without them.

We may with great profit to ourselves, I think, turn our studies in that direction, not perhaps with a view to dispensing with servants, but in order that when we chance to be without any, we may find ourselves less annoyed, and perhaps better able to choose who should serve us, rather than to submit to any chance applicant for the position, inasmuch as we can accomplish our kitchen work without such drudgery as people are wont to make of it.

The most important provision for saving labor is to shorten distance between points that must be reached repeatedly during the operation of any work that has to be done every day or several times a day; therefore it is well to have the table upon which we prepare food or dish it up after it is prepared just as near the stove as circumstances will allow, there being no space so frequently travelled over as this. Next to this the distance to the store-room, pantry and cellar should be a matter of serious calculation when these necessary provisions are being arranged. This is simply justice to the cook, whether it may be one that is hired or one of ourselves. It requires no great amount of mathematical calculation to demonstrate the immense waste of physical power to travel over twenty-five feet of space twenty-five times a day, when ten might as well have been made to answer the purpose, and this is no uncommon experience, while the party who is chiefly responsible therefor will ridicule the idea of making complaint over such a trifle.

It should be borne in mind that almost everything to be done in the routine work of the house has to be so often repeated each day and all the year round.

Mistakes in regard to the location of kitchen appendages seem so irremediable that those of half a century ago are allowed to remain until the century has completed itself. It were better for the whole house to burn down than that many of these mistakes be left to ruin another generation of women. Architects of the present time make a study of this feature of a house, and whoever can do so, should have the advice of one, to arrange or rearrange the kitchen and its subordinate quarters.

When the kitchen is what it should be and likewise its furnishings, no lady need hesitate to take upon herself its duties if the occasion so requires. Suitably equipped for the purpose, and with a knowledge of the business in hand, there is no reason why a refined and educated woman might not find as much satisfaction in arriving at desired culinary results as the chemist does in his laboratory.

But I hear one lady say there is no lasting satisfaction in getting up a good dinner, it is so soon over and only scraps and dish-washing left for us to meditate upon. This is a mistake; it is not the material part of anything that is lasting. If we have indeed accomplished a perfect success in our cooking, only for once, the influence of it will perhaps outlast ourselves. Some one who sat at our board upon that occasion will ever bear in mind our delicious bread, or coffee, or whatever made the greatest impression,

and upon the strength of it we may become so elevated as to be to them a queen among housekeepers. The innate satisfaction, too, of being able to do the best that can be done in this, as in anything else requiring skill, is by no means to be despised.

But there is a more serious light than this in which kitchen work should be viewed. The work that belongs strictly under this head is what relates to cooking chiefly; and whoever attends to this handles usually a very important proportion of the provider's means. Hence it is of the utmost consequence that what is provided should be made the most of; that is, that it should be so prepared as to obtain the best results, and with the greatest economy.

We all know that among those we employ there is great difference as to the amount wasted, but we refuse to see that they all waste more or less, notwithstanding our utmost vigilance. Some of us can afford to ignore these things if we are content to abide consequences, and some again have no alternative, because they cannot be independent of such help, by reason of inability to help themselves; but there are, alas, many who submit that should not, inasmuch as they cannot afford such leakages, and they might help themselves if they were so disposed. It is this class that should awaken to the simplicity and folly of allowing their substance to run away from them, through the kitchen drain or back gate, while they continue to foster the idea that kitchen work is degrading or too hard for them to do themselves, at the same time submitting to deprivations, which jeopardize health and sacrifice common comforts of life, which this wastage would provide, because forsooth they cannot pay for them.

Of course in time all persons of ordinary common sense learn these things to some extent from experience, but in this, as is often the case in other respects, "experience becomes a dear school." Bread cast thus upon the waters will not return to us, though we may want it sorely.

Habit, and regard for appearances, make us think a kitchen maid a necessity very often when the necessity does not exist, there being in reality not enough work to prevent a kitchen maid from becoming demoralized as regards labor, and not any more than any lady requires to keep mind and body in healthy exercise; or if there should be some few menial duties which a lady naturally avoids if she can, a little good management can often provide for these by employing a suitable help by the hour, paying a good honest price for a good hour's work, instead of training the average servant into ways of idleness; or perhaps worse, keeping a poor woman away from her natural home duties all the day to do a quarter day's work for her employer. We were never meant to be as utterly idle as the custom of avoiding kitchen work, merely because it is such, causes many to become. They have yet to learn the dignity of labor that secures to us properly prepared food, keeps us in constant knowledge of the way in which our means are expended, and exercises all our faculties in a true womanly manner.

I would not for a moment be understood as advocating that any should do their own kitchen work, when they are abundantly able to employ those whose livelihood depend upon such service. There will doubtless ever be a class who must be thus provided for, and as far as our circumstances justify it, we are right to avail ourselves of their service, and in so doing we leave ourselves more free to attend to pursuits for which we are better fitted than they, and which are more congenial to us.

The idea I wish clearly to convey is that it is right and becoming to serve ourselves, when occasion calls for it, and not by any means as hard to do, as we think it is. Nor need it be disagreeable work if we have a care in the management of it. The righteous savings which may thus occur to us, will in many cases prevent oppressive and corroding care in other matters, and likewise make the indulgence of personal requirements possible.

CHAS.



## A Word to the Girls.

In accepting a space in your excellent columns I propose to give a few gentle hints to girls. There are so many openings now for women that I want to impress on the minds of the young to prepare for every emergency. You do not know where your lines will be cast, whether in pleasant places or thorny pathways. Remember these golden days will never return; one day lost is lost forever. Deny yourselves fine clothes and luxuries; store your minds with useful knowledge and rest assured you will reap a rich reward. What a pitiable sight to see a whole family of boys and girls, working from daylight till dark, with no food for their minds until they become dwarfed, and if the time ever comes when they can be spared from work they are ashamed of their ignorance, and shrink from school. If you would possess true beauty your mind must be stored with beautiful thoughts.

MIEFAN.

## Things to be Known.

For a Felon—Take equal parts of gum camphor, gum opium, castile soap and brown sugar; wet to a paste with spirits of turpentine; prepare it and apply a thick plaster of it.

For Sprains—Bathe with arnica, diluted with water, and bandage with soft flannel moistened with the same. A sprained wrist thus treated will grow well and strong in a few days.

A Sure Cure for Chilblains—Three applications of vaseline will cure the worst case of chilblains. For ordinary cases one or two applications will be sufficient. Although vaseline is made from petroleum it is far more rapid in its work of healing than kerosene.

## Domestic Recipes.

SCALLOPED POTATOES make a nice dish for tea. Prepare in this proportion: Two cups of mashed potatoes, two tablespoonsful of cream or milk, and one of melted butter, salt and pepper to taste. Stir the potatoes, butter and cream together, adding one raw egg. If the potatoes seem too moist, beat in a few fine bread-crumbs. Bake in a hot oven for ten minutes, taking care to have the top a rich brown.

Do not throw away the bits of toilet soap which are too small to be used when bathing, or which are usually put into the slop-jar. There is nothing so satisfactory to use for the purpose of cleaning oilcloth and finger marks on paint. Put the little pieces in hot water and let them dissolve. The ends thus made will not attack the varnish as that does which is made from common coarse soap. Keep a bowl in some convenient place to hold these bits of soap.

An appetizing way to serve eggs for breakfast is to scallop them. Boil them hard, chop them not too fine. Line a pudding dish with a layer of bread crumbs, then a layer of cold boiled ham, or bits of fried ham chopped fine, then a layer of eggs, and so on until the dish is full. Moisten with cream and a little butter, season with pepper and salt, set in a hot oven for ten minutes, or longer. When thoroughly heated take out and send to the table in the dish, or on slices of buttered toast. Pour a little boiling water over the toast after it is buttered.

A good cement may be made by mixing together litharge and glycerine to the consistency of thick cream or fresh putty. This is useful for mending stone jars and holes in tin or iron kettles. It will resist the action of water, hot or cold, of acids and of almost any degree of heat. Dry thoroughly before using. This is good for aquariums. 2. Make a cement with six parts of dry clay, one of iron filings and linseed oil to mix with to a paste.

## The Grange.

## Maryland Granges.

MONTGOMERY COUNTY GRANGE, No. 7, held its regular quarterly meeting at Rockville, January 31, 89 voting members and a number of visitors being present. J. T. DeSelle from the Executive Committee read a paper on the resources of our county and State, and the dignity and importance of the Grange organization. C. R. Harshorne made a full and able report on the tariff, as it affects the interests of farmers, which gave rise to a long and interesting discussion. On motion of Henry C. Hallowell, the Grange heartily and unanimously endorsed the bill now before the Legislature to turn the Pikeville arsenal property into an Agricultural Experiment Station, and a petition to this effect was signed and forwarded to Mr. Howard Griffith, the chairman of the House Committee on Agriculture. Isaac Young, Wm. H. Farquhar and Henry C. Hallowell were, on motion of E. J. Chiswell, appointed a committee to examine whether there are to be had suitable books on elementary agriculture to be used in our public schools. Henry C. Hallowell, Roger B. Farquhar and John E. Willson made earnest appeals to the responsible citizens of the county, to attend the meetings of the Agricultural Society and see that proper measures for the management of the fairs are adopted, and the right kind of men elected to carry them out.

FAIRLEE, No. 8, Kent County.—To initiate thirty candidates at one time! I heartily endorse Sister Lansdale, Secretary of Dayton, No. 176, that it would be very interesting to hear from the different Granges in the state, and carrying out her suggestions I will state Fairlee is in a flourishing condition. We are to initiate thirty candidates at our next meeting. I wish Sister Lansdale could see it. The most of them are young men, some of Kent's noblest sons. We are to have one of our special meetings Thursday, the 14th. Reading of the Grange Garter by Sister Laura Gale; Lecture by T. A. Hulme; vocal and instrumental music, and, last but not least, our feast. Turkeys, canvas back ducks, diamond back terrapins, and Chesapeake Bay oysters. Who would not join Fairlee Grange? We are now occupying our new Grange Hall, store on the lower floor; on the second the hall; on the third dining saloon and kitchen with stove, cooking utensils, china, and every convenience for housekeeping, and our sisters are busy furnishing and decorating the hall.

GRANGER.

MYRTLE GRANGE, No. 106, Anne Arundel County.—The following officers were publicly installed on the 30th instant, by state Master Devries: Master, R. S. Cole; Sec., W. H. Downs; O., A. Rider; Lec., W. A. Shipley; St., G. W. Merritt; Ast. St., R. D. Phelps; Chap., S. Linthicum; T., R. L. Shipley; G. K., F. P. Anderson; Ceres, A. E. Cole; P., L. L. Shipley; F., S. A. E. Winterson; L. A. St., A. S. Linthicum. The following resolutions were adopted unanimously.

Resolved, That Myrtle Grange will stand by the State Master and the executive committee of the Grange agency in their efforts to perfect the present system of managing the agency.

GLENCOE, No. 160, will have a public installation of its officers on Wednesday, 20th instant. State Master H. O. Devries will deliver an address.

## Open the Door to the Grange!

Reading a communication in your January 15th issue, signed Wm. Holman, I was struck with the ideas it presented, being long ago disgusted with the puerile forms, and being persuaded the secret and curiosity features are worn threadbare, and the time come for reason and common sense to resume sway, as success cannot be attributed to these forms or secrecy.

The time occupied in admitting patrons to the different degrees, is so much time wasted. The great object ultimately to be achieved is rendered secondary, and as far as I can judge, the most intelligent patrons grow weary, their minds unoccupied for hours, meeting after meeting, and finally retire. As we are as much interested as ever in the objects of the Grange, and as ultimate success depends upon numbers and intelligence, to check the strong disposition of the age to yield all the advantages of our political system to the allurements of office and capital, to the detriment of nine-tenths of our people.

Our co-operative business holds out great inducements to many, and is unquestionably well worthy more consideration than it gets in pecuniary value, and is capable of being greatly extended.

The restraints imposed upon the free discussion of political economy as applied too or affecting agriculture, the want of ability or the lack of interest in discussing crops, the narrowing the choice of patrons to agriculturists, lessen the sources from which success must come.

While we need a greater diffusion of all knowledge, we especially need a greater knowledge of political economy. We require a greater unity of feeling among all kinds and classes of labor. We cannot see why all kinds of labor cannot act together upon a common principle that governs all labor. It is equally important to restrain labor within proper and just limits, as to prevent capital by its power of corruption and deception from taking advantage of a confiding or ignorant people. It is as essential to check self-interested and partisan office hunters, by preventing bribery at primaries, as at regular elections; and to adopt the principle to be governed by merit alone in choosing the candidates. The secret access of capital is difficult to prevent, as the love of money overcomes the rectitude of many. Yet, as it cannot be hid, the combined forces of labor will bring confusion of face. Let us then to this end combine as far as possible all labor, encourage diffusion of knowledge and co-operative business!

Again, we aver we believe secrecy unworthy an independent people, puerile forms unbecoming an honest association, a waste of time amid and realities; time is precious to labor; by the sweat of our brows, by hard blows, by persistent efforts, we earn appetite, bread and health; by persevering efforts of head, hands and fingers, we attain the highest arts; we dig the ores and coal, and by our handiwork we give them all the forms adapted to our purposes; we manipulate the rock, and shape it into useful and beautiful forms.

We render the soil obedient to our needs; to add to the beauty of our wives and daughters, if that be possible, we weave into glowing colors the threads of silk and cotton they prize, and our fingers tipped with art, concentrate—might we not say concentrate?—the lights and shades of forms more gorgeous than the sky. All that earth yields are turned by brain or hand or fingers to useful purposes, to adorn or sustain life itself.

Now we ask why should not all these and many others combine, not for pecuniary purposes alone, but to further the education of the head, hand and fingers, for all true and honest purposes, to uphold morality and maintain equal laws and rights for all—self-poised, granting exceptional favors to none—throwing the same protection around the laborer as around property—protecting voluntary combination, allowing no force, giving or granting no legislative favors to either or any.

All the ancient kingdoms have decayed and been blotted out the face of the earth, some more modern have hastened to decay. The blood of bulls and goats could not save Israel. What has caused this downfall? No government can live unless founded on truth and honesty. Corruption will surely sap the foundation of ours. Is there not inducement to extend the bounds of our tents? Are the men only who turn the soil to the vivifying sun rays alone worthy? Are not the workers in wood and iron? What is the matter with the chemists, botanists, entomologists and geologists? Thousands of

men who seldom see the sun are equally interested in maintaining and preserving equal laws and rights; in fact, are not all who will declare their determination to do so, who are willing to oblige themselves to abide by certain fixed rules, worthy to unite together for the purposes openly declared?

Associations can be classified into different orders, and for different purposes, and each individual can choose for himself.

**DELAYS ARE DANGEROUS.**—A slight pain in the back, headache, or heaviness about the chest and stomach may portend of something very serious, while if taken at the start it is easily remedied. We don't know of a more valuable remedy in such cases than J. M. Laroque's Anti-Bilious Bitters. Their action upon the human system is truly wonderful. Don't delay, but use the Bitters now; the price is reasonable, and all druggists sell them; 25 cents and \$1. W. E. Thornton, proprietor, Baltimore, Md.

## Baltimore Markets—Feb. 16.

**Flour.**—Fairly active and firm and something higher for the lower grades and medium families. We quote: Howard Street and Western Super at \$2.75@3.35; do. do. Extra, \$3.50@4.55; do. do. Family, \$4.75@5.75; City Mills Super, \$3.75@3.85; do. Extra, \$3.75@4.85; do. (Rio brands) Extra, \$5.75@6.75; Baltimore Winter Wheat Patent, \$7; do. High Grade Family, \$6.50; do. Second Grade Extra, \$6.25; do. Third Grade Extra, \$6; Fine, \$3.50; Rye Flour \$3.75@4; Corn Meal 7 100 lbs., \$1.30; Collier's Excelsior Graham, \$7.

**Wheat.**—There is a fair inquiry for Southern and the market is steady, with moderate offerings. The moderate business reported was at \$1.13 for mixed on track and \$1.14@1.16 for longberry delivered. Western ruled fairly active and higher, closing strong at the highest price. The closing quotations were at \$1.10@1.10 1/2 for spot, \$1.10@1.10 1/2 for February, \$1.10@1.10 1/2 for March, \$1.12@1.13 1/2 for April and \$1.14@1.14 1/2 for May.

**Corn.**—Rather more Southern is arriving but there is a good demand, and the market is firm in sympathy with the advance in Western. Good to choice white sold at 59@60 cts. at spot, and yellow brought 58@61 cts. as to condition and location. Western ruled inactive but higher, closing firm. The closing prices were 61 1/2 cts. for spot, 61 1/2@61 1/2 for March and 64 1/2@64 1/2 cts. for May.

**Oats.**—Slow and quiet, but nominally steady in the absence of fresh business. We quote Maryland and Pennsylvania at 42@45 cts.; mixed Western, 42@43 cts.; white do. 44@45 cts.

**Rye.**—There is a better demand, and the market is firm in tone. Some 1,100 bushels fair to choice Maryland and Pennsylvania sold in lots at 65@69 cts.

**Seeds.**—The demand for Clover is moderate and the market is dull but nominally steady. Small sales of choice are reported at 10 1/2 cts. V. S. Timothy is quoted at \$1.45@1.50 a bushel for car loads and \$1.55@1.60 for job lots.

**Hay and Straw.**—There is a constant demand for good grades of Hay, and the market is steady, with moderate supply. We quote as follows: Cecil county Timothy \$16@17; Maryland and Pennsylvania Timothy, \$14@15; mixed, \$10@12; Clover, \$8@10; Western, \$11@15 a ton for common to choice. Straw is quiet and steady at \$7@8 for wheat, \$10@11 for oat, \$13 for long rye and \$10@11 for short do.

**Mill Feed.**—The offering is moderate, and the market is quiet and steady under a constant demand at \$21@23 a ton for Western and \$20@22 for City Mills.

**Provisions.**—The tendency of the Western markets is still upward and the general situation is firm and fairly active. Packed lots from store are quoted as follows: Bulk shoulders, 8 1/2 cts.; clear-rib sides, 10 1/2 cts.; Bacon shoulders, 9 cts.; clear-rib sides, 11 1/2 cts.; Hams—Sugar-cured, 14 1/2@15 1/2 cts. Refined Lard, in tierces, 10 1/2 cts. Mess Pork, \$17.50 a bbl.

**Dressed Hogs.**—The market is firm and higher under moderate supply and fairly active demand at \$5.50@6.75 a 100 lbs. for good to choice light weight. **Butter.**—The arrivals are liberal, but the demand is slow and the market is dull and easy. Only best table stock is salable at current prices. We quote prime to choice New York State at 22@23 cts.; fresh Western packed choice at 20@23 cts., do. good to prime at 16@18 cts.; Western rolls at 15@20 cts. per lb., and nearby receipts at 15@20 cts. V. S.

**Eggs.**—The demand is slow, and the market is dull and easy with fairly liberal offerings. Fresh lots are quoted at 22@23 cts. V. S. dozen.

**Cotton.**—The market is rather better under an improved demand from spinners, and for full grade prices are in sellers' favor. We quote as follows: Middling at 10 1/2@10 3/4 cts., low middling at 10 1/4 cts., strict good ordinary at 10 cts., and good ordinary at 9 1/2 cts. At New York spots closed quiet at 10 1/2 cts., and futures closed dull, as follows:

February	10.75
March	10.80
April	10.91
May	11.06
June	11.10
July	11.29
August	11.39
September	11.07

**Tobacco.**—Leaf.—The market is quiet. We quote Maryland inferior fringed \$2@3; do. sound common, \$3.50@5; good common, \$5.50@6.50; do. middling, \$7@8.50; do. good fine red, \$8.50@11; do. fancy, \$12@14; upper country, \$5@15; do. ground leaves, \$3@8; Ohio, inferior to good common, \$4@6; greenish and brown, \$5@7.50; do. medium to fine red \$7@10; common to medium spangled, \$7@10; do. fine spangled and yellow, \$11@16; do. air-cured medium to fine, \$6@14.

**Live Stock.**—**Beef Cattle.**—The market has been very slow again throughout, and closed rather later than it did last week, considering the number of offerings. The few top offered were somewhat better than those of last week, and good butcher cattle in lighter supply than common grades. We quote as follows: Best \$6.50@7; that generally rated first quality, \$5.37 1/2@6.12 1/2; medium or good fair quality, \$3.75@5.25; ordinary thin Steers, Oxen and Cows \$3@3.25. Extreme range of prices \$2@7. Most of the sale were from \$3.75 1/2@5.37 1/2 per 100 lbs. f. **Swine.**—Trade is fair to good, and prices are higher. We quote common light Hogs at 8 1/2@9 cts., and the better grades 9 1/2@9 3/4 cts. per lb. net. **Sheep and Lambs.**—We quote common to fair Sheep at 8 1/2 cts., fair to extra 8 3/4 cts. per lb.



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The Farm of the late LUTHER GIDDINGS, Esq.

In consequence of the death of the late Luther Giddings, Esq., his valuable Farm near Annapolis, Md., will be sold by his heirs at a figure considerably less than that at which he held it.

The property consists of 205 acres, and will be sold in whole or part.

It lies between the Severn River, a navigable salt-water Creek, and the property of the United States Navy, (the old Strawberry Hill place), its other boundary being a straight line.

It is improved by a large and commodious new frame house, and has several other fine building sites upon it, one, the most beautiful site in the county.

It is planted with a very large number of the best varieties of fruit and grapes.

The late owner was a successful grower of grapes and maker of wines.

The farm is in perfect order and well stocked in every way. Arrangements could be made for the sale of the stock, implements, etc., with the place.

It is only 20 minutes drive from Annapolis, over a good shell road through the Government property, or 25 minutes by going around the head of the College Creek.

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Besides all necessary and convenient farm buildings in perfect order, there are a Dairyman's and Vine-dresser's cottages on the place.

The Dairy business is in full operation now, and a competent Vine-dresser living on the place can be employed if desired.

A bed of brick-clay on the farm has been and still can be worked to advantage.

Possession can be given immediately.

Apply at the premises, or address or call on

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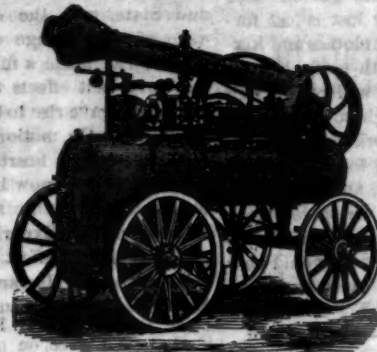
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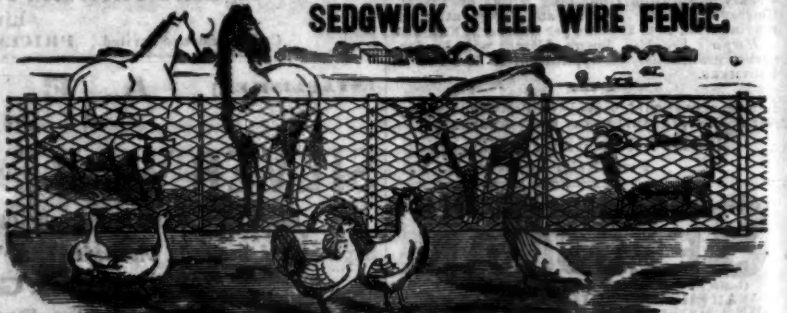
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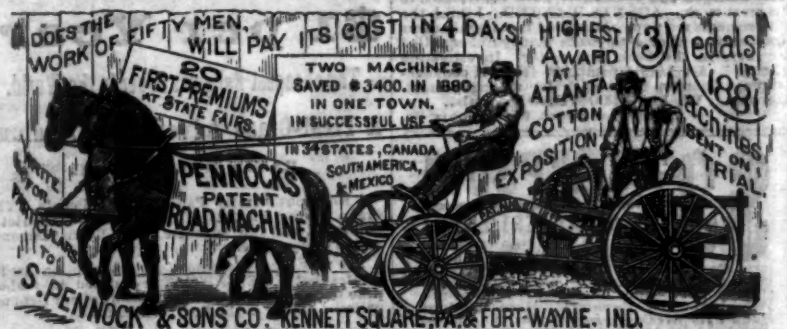
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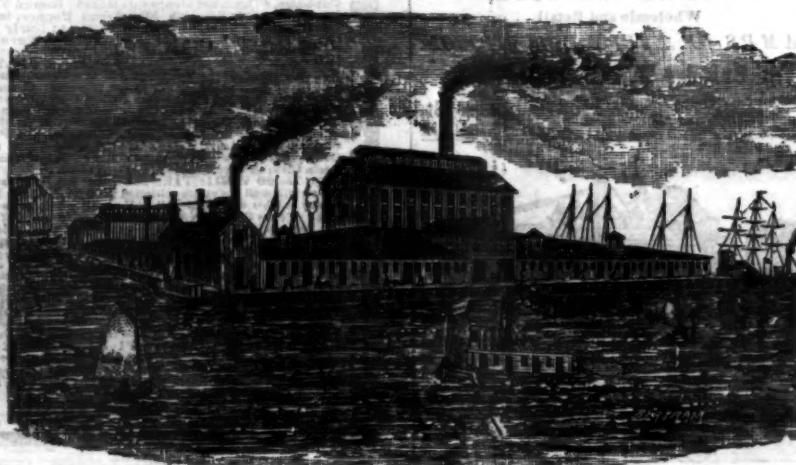
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